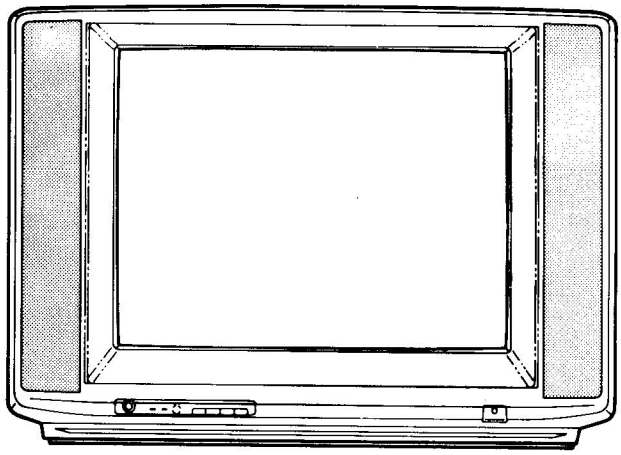
SERVICE DATA
FILE NO. 050-463
DUAL SYSTEM

TOSHIBA

COLOUR TELEVISION



SPECIFICATIONS

Input Power Rating:	AC 220 volts, 50 Hz 140 W
Aerial Input Impedance:	75 ohm unbalanced type for VHF and UHF
Receiving Channels:	PAL B/G Standard, SECAM B/G Standard: VHF ..... channels 2 to 4, 5 to 12, S1 to S20 and S21 to S41 UHF ..... channels 21 to 69
Intermediate Frequencies:	Picture I-F carrier frequency ..... 38.9 MHz Sound I-F carrier frequency ..... 33.4 MHz (MPX) 33.16 MHz
Picture Tube:	25 inches, A59ECY13X31, 590 mm (measured on diagonal of viewable picture area), 110° deflection
Sound Output:	10.0 watts (at 10% harmonic distortion) x 2
Speakers:	120 mm x 60 mm 2 pcs 70 mm x 60 mm 2 pcs
Aux. Terminals:	Headphone Jack, 21 pin socket, 21 pin (S-VIDEO/AUDIO) socket
Cabinet:	Table type
Dimensions:	Height ..... 513 mm Width ..... 734 mm Depth ..... 455 mm
Weight:	27.3 kg

Specifications are subject to change without notice.

Printed in Japan Oct. 1991 (So)

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 25.2 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 29.9 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.
   For continued safety, replacement component should only be made after referring the Product Safety Notice below.

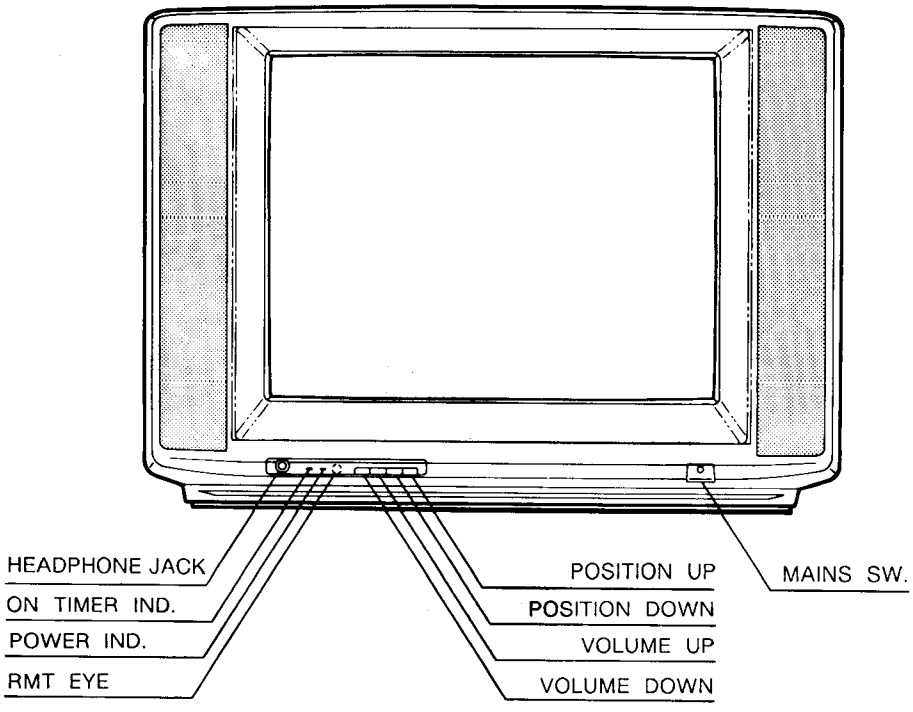
SAFETY PRECAUTION

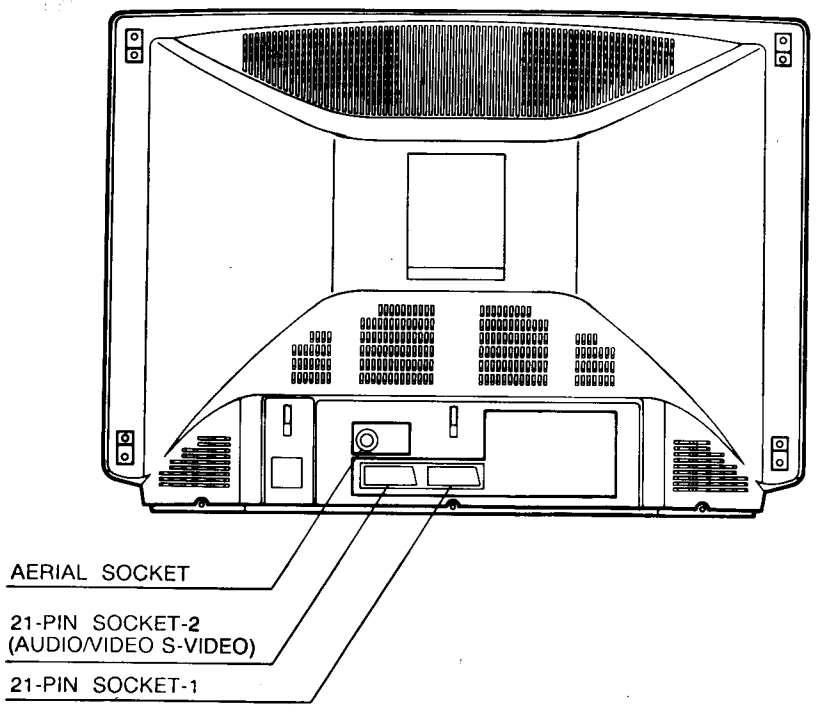
1. This receiver has a nominal working E.H.T. voltage of 23.5 kV. Extreme caution should be exercised when working on the receiver with the back removed.
   Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.
   When handling or working on the C.R.T.; always discharge the anode to the receiver chassis before removing the anode cap
   The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
   Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

PRODUCT SAFETY NOTICE

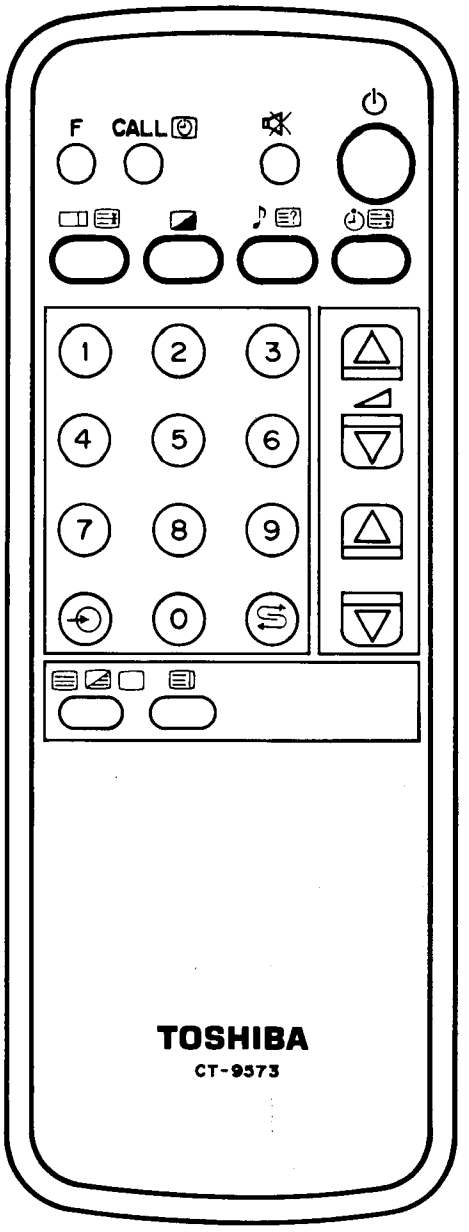
Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

FRONT CONTROLS AND REAR VIEWS





REMOTE HAND HELD UNIT



KEY ASSIGNMENT

⏻ ..... ON STANDBY 🔇 ..... MUTE

CALL ..... CH. DISPLAY CALL [+ F ; TIMER DISPLAY ⏲]

F ..... DOUBLE PUSH OPERATION KEY
(TEXT CONCEAL, QUICK & SERVICE MODE)

RED ..... MENU <TV> TUNING & SETTING [▭]
–1 <TEXT> RED (FLOF), ROTATE (NORMAL)
[+ F ; HOLD ▤]

GRN..... MENU <TV> PICTURE CONTROL [◪]
–2 <TEXT> GREEN (FLOF), LIST (NORMAL)
[+ F ; PICTURE CONTROL ◪]

YEL..... MENU <TV> SOUND CONTROL [♪]
–3 <TEXT> YELLOW (FLOF), INITIAL (NORMAL)
[+ F ; REVEAL ▤?]

CYN..... MENU <TV> TIMER MENU [⏲]
–4 <TEXT> CYAN (FLOF),
[+ F ; F-T-B ▤]

1~9, 0..... TEN KEY

+ ..... LEVEL PLUS (VOLUME, MENU)
[+ F ; QUICK OPERATION)

– ..... LEVEL MINUS (VOLUME, MENU)
[+ F ; QUICK OPERATION]

▲ ..... UP (POSI., CH-Search, TEXT PAGE, MENU)

▼ ..... DOWN (POSI., CH-Search, TEXT PAGE, MENU)

⏎ ..... VIDEO INPUT/TV ⇄ ..... PREVIOUS

☰ ◪ ▢ ... TEXT/MIX/TV ▤ ..... TEXT INDEX

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATIONS

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 220 volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least one hour in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 29.9 kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 29.9 kV under any conditions.

HEIGHT ADJUSTMENT

1. Receive the WG PHILIPS pattern, and set the contrast and colour to centre, and the brightness to centre.
2. Change the VERT POSITION SW (S301) so the round shape in the pattern is located in the centre of screen.
3. HEIGHT Control (R351) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

HORIZONTAL CENTRE ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Set the contrast and colour to centre, and the brightness to centre.
3. Adjust Sub Address HPS so the pattern centre can be located at the screen centre.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

SIF DET ADJUSTMENT

1. Connect SIF generator to pin 2 of ICG30 through 0.01 μF capacitor.
2. Connect the oscilloscope to pin 9 of ICG30.
3. Set up the SIF generator as described below.
   Sound carrier frequency : 5.74 MHz
   Modulation frequency : 1000 Hz
   Frequency deviation : ±15 kHz
   Signal level : 80 dBμ (50 ohm load)
4. Adjust LG80 for the maximum response of 1000 Hz det-out on scope.
5. Connect SIF generator to pin 2 of ICG03 through 0.01μF capacitor.
6. Connect oscilloscope to pin 9 of ICG03.
7. Set up the SIF generator as described below.
   Sound carrier frequency : 5.5 MHz
   Modulation frequency : 1 kHz
   Frequency deviation : +15 kHz
   Signal level : 80 dBμ (50 ohm load)
8. Adjust LG05 for the maximum response of 1 kHz det-out on scope.
9. Remove the wire between pin SQ of PG02 and ground.

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

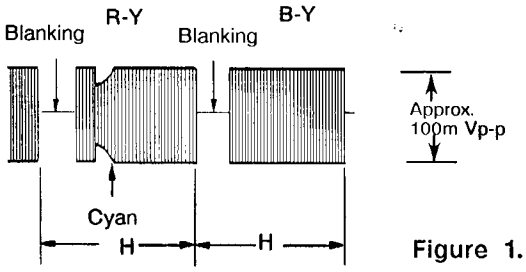


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

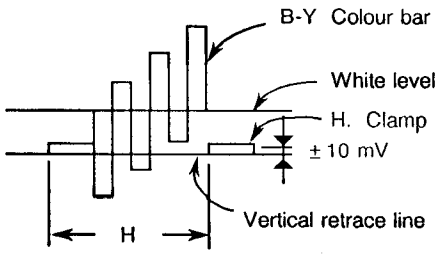


Figure 2.

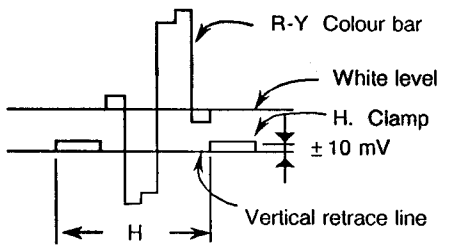


Figure 3.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme of the Philips pattern.
2. Set the COLOUR Control to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

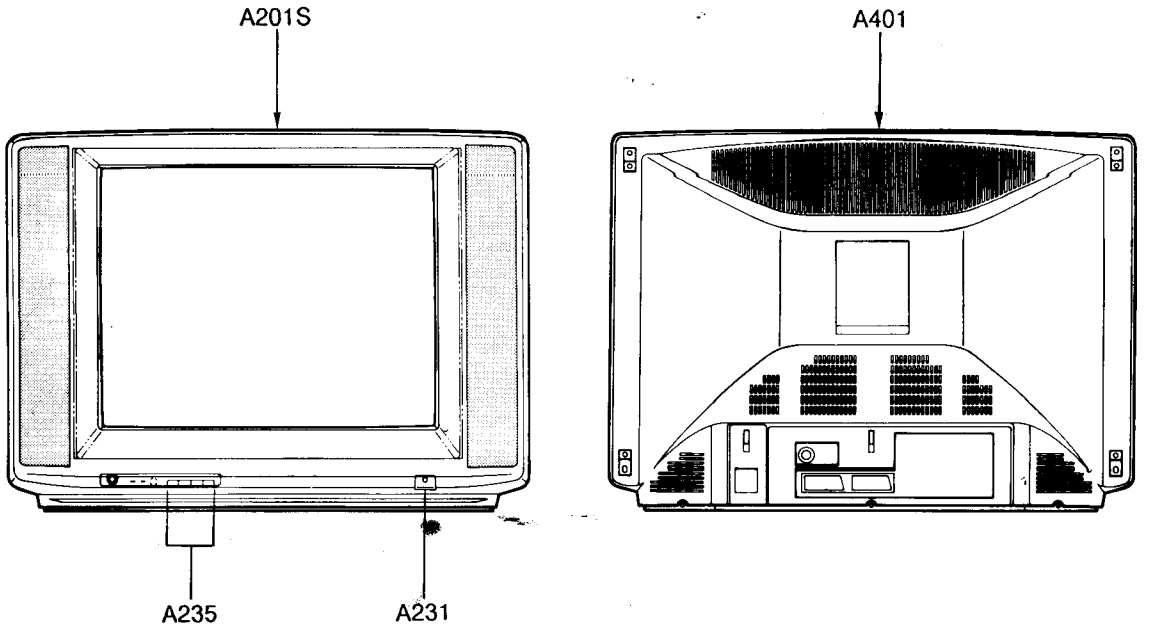
CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Set "SERVICE MODE" by RMT H.H.U. ((F) + ⊖ and (1), (0), (4), (8))
3. Turn the SCREEN Control (on T461) fully counter-clockwise.
4. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) to the mid position.
5. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the center.
6. Set the "CUT OFF (No Vertical Deflection) MODE" by RMT H.H.U. ((F) + (2) key)
7. Rotate the SCREEN Control gradually clockwise until the first line appears slightly on the screen. Set the SCREEN Control to this position.
8. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
9. Release the "CUT OFF MODE" by RMT H.H.U. ((F) + (2) key)
10. Set the CONTRAST and COLOUR Controls to minimum, and BRIGHTNESS Control to the maximum.
11. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
12. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.
13. Exit from the "SERVICE MODE" by turning the power ON/OFF with RMT H.H.U.

SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the "SERVICE MODE" by RMT H.H.U.
3. Set the CONTRAST Control to the maximum and BRIGHT Control to the center.
4. Set the COLOUR Control to the minimum.
5. Select the "SUB" symbol (F + ◪ (Item UP), F + ♪ (Item DN)) and adjust the level to the center by LEVEL key of RMT H.H.U. and leave the TV for five minutes in this state.
6. Watching the picture well, adjust the SUB-BRIGHT Control in the position (same method as in step No.5) where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
7. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
8. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT Control again for the acceptable picture.
9. Exit from the "SERVICE MODE" by turning the power ON/OFF with the RMT H.H.U.

CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201S	23419279	Front Cover
A231	23443970	Button, Power
A235	23443552	Button, Up-Down
A401	23424271	Back Cover
A411	23567668	Label, Model No., B/C
A412	23995762	Label
A701	23523937	Carton Box
A702	23935027	Packing, Bottom
A703	23935059	Packing, Top
A710	23567673	Label, Model No., Carton
B121	23712306	Screw, PP3X.5X6SZN
Y101	23561357	Owner's Manual
Y110	23561396	Sheet

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION" , "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

ABBREVIATIONS:

Capacitors..... CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
Resistors..... CF : Carbon Film CC : Carbon Composition MF : Metal Film
OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24815102	Chip, 1000pF, ±10%
C102	24815102	Chip, 1000pF, ±10%
C103	24285102	Chip, 1000pF, ±10%
C104	24206478	EL, 0.47μF, 50V
C105	24814103	Chip, 0.01μF, +80%, −20%
C106	24814103	Chip, 0.01μF, +80%, −20%
C107	24781221	Chip, 220pF
C108	24206478	EL, 0.47μF, 50V
C109	24814103	Chip, 0.01μF, +80%, −20%
C110	24203470	EL, 47μF, ±20%, 16V
C111	24815102	Chip, 1000pF, ±10%
C112	24815102	Chip, 1000pF, ±10%
C113	24285102	Chip, 1000pF, ±10%
C114	24814103	Chip, 0.01μF, +80%, −20%
C115	24285102	Chip, 1000pF, ±10%
C116	24206010	EL, 1μF, 50V
C117	24778181	Chip, 180pF
C118	24814103	Chip, 0.01μF, +80%, −20%
C120	24794331	EL, 330μF, 16V
C121	24794221	EL, 220μF, 16V
C122	24814103	Chip, 0.01μF, +80%, −20%
C123	24815102	Chip, 1000pF, ±10%
C124	24203470	EL, 47μF, ±20%, 16V
C125	24814103	Chip, 0.01μF, +80%, −20%
C170	24781120	Chip, 12pF
C171	24814103	Chip, 0.01μF, +80%, −20%
C180	24797229	EL, 2.2μF, ±20%, 50V
C181	24794471	EL, 470μF, ±20%, 16V
C182	24474103	CD, 0.01μF, ±30%, 16V
C183	24797229	EL, 2.2μF, ±20%, 50V
C184	24797229	EL, 2.2μF, ±20%, 50V
C186	24474103	CD, 0.01μF, ±30%, 16V
C187	24232103	CD, 0.01μF, +80%, −20%
C188	24232103	CD, 0.01μF, +80%, −20%
C189	24797010	EL, 1μF, ±20%, 50V
C190	24212102	CD, 1000pF, ±10%
C191	24474103	CD, 0.01μF, ±30%, 16V
C201	24085981	EL, 10μF, ±20%, 16V
C202	24795101	EL, 100μF, 25V
C203	24474103	CD, 0.01μF, ±30%, 16V

Location No.	Part No.	Description
C204	24797220	EL, 22μF, ±20%, 50V
C205	24206478	EL, 0.47μF, 50V
C208	24474103	CD, 0.01μF, ±30%, 16V
C209	24474103	CD, 0.01μF, ±30%, 16V
C210	24436220	CD, 22pF
C212	24474103	CD, 0.01μF, ±30%, 16V
C213	24232103	CD, 0.01μF, +80%, −20%
C214	24794220	EL, 22μF, ±20%, 16V
C215	24212102	CD, 1000pF, ±10%
C216	24794100	EL, 10μF, ±20%, 16V
C217	24436331	CD, 330pF
C220	24473300	CD, 30pF
C240	24797478	EL, 0.47μF, ±20%, 50V
C301	24797229	EL, 2.2μF, ±20%, 50V
C302	24212152	CD, 1500pF, ±10%
C303	24590563	PF, 0.056μF
C312	24590563	PF, 0.056μF
C313	24796221	EL, 220μF, ±20%, 35V
C314	24796102	EL, 1000μF, 35V
C315	24214221	CD, 220pF, ±10%, 500V
C316	24795332	EL, 3300μF, 25V
C317	24617912	EL, 2.2μF, ±10%, 50V
C319	24082057	PF, 0.22μF, 100V
C321	24214391	CD, 390pF, ±10%, 500V
C322	24796221	EL, 220μF, ±20%, 35V
C323	24082049	PF, 0.047μF, 100V
C371	24590183	PF, 0.018μF
C372	24617912	EL, 2.2μF, ±10%, 50V
C373	24797478	EL, 0.47μF, ±20%, 50V
C374	24617926	EL, 220μF, ±20%, 16V
C375	24590222	PF, 2200pF
C376	24474102	CD, 1000pF, ±10%
C377	24474222	CD, 2200pF, 16V
C378	24590104	PF, 0.1μF
C402	24353241	CD, 240pF
C403	24797339	EL, 3.3μF, ±20%, 50V
C405	24590203	PF, 0.02μF
C406	24590153	PF, 0.015μF
C407	24590243	PF, 0.024μF
C408	24797100	EL, 10μF, ±20%, 50V
C409	24232103	CD, 0.01μF, +80%, −20%

Location No.	Part No.	Description
C410	24693562	PF, 5600pF, 100V
C416	24214271	CD, 270pF, ±10%, 500V
C417	24214332	CD, 3300pF, ±10%, 500V
C418	24790100	EL, 10μF, ±20%, 160V
C421	24095755	PF, 0.47μF, 200V
C422	24828683	PF, 0.068μF, 200V
C423	24095824	PF, 0.27μF, 200V
C424	24676479	EL, 4.7μF, ±20%, 100V
⚠ C440	24095888	PF, 0.01μF, ±3%, 1600V
C441	24214221	CD, 220pF, ±10%, 500V
C443	24214221	CD, 220pF, ±10%, 500V
C445	24095903	PF, 0.056μF, ±10%, 250V
C446	24829273	PF, 0.027μF, 400V
C447	24700479	EL, 4.7μF, ±20%, 250V
C448	24667102	EL, 1000μF, ±20%, 25V
C449	24666471	EL, 470μF, ±20%, 16V
C451	24640908	EL, 33μF, ±20%, 160V
⚠ C463	24212222	CD, 2200pF, ±10%
⚠ C464	24082330	PF, 2000pF, ±3%, 1400V
C465	24095758	PF, 0.62μF, 200V
C466	24640933	EL, 1μF, ±20%, 200V
C501	24797220	EL, 22μF, ±20%, 50V
C505	24590273	PF, 0.027μF
C507	24590103	PF, 0.01μF
C508	24085944	EL, 2.2μF, ±20%, 50V, Non-Polar
C510	24474103	CD, 0.01μF, ±30%, 16V
C511	24474103	CD, 0.01μF, ±30%, 16V
C513	24232103	CD, 0.01μF, +80%, −20%
C514	24212271	CD, 270pF, ±10%
C515	24797220	EL, 22μF, ±20%, 50V
C516	24590104	PF, 0.1μF
C517	24590104	PF, 0.1μF
C518	24474103	CD, 0.01μF, ±30%, 16V
C519	24474103	CD, 0.01μF, ±30%, 16V
C520	24797478	EL, 0.47μF, ±20%, 50V
C521	24538474	PF, 0.47μF
C522	24538474	PF, 0.47μF
C523	24538474	PF, 0.47μF
C524	24474103	CD, 0.01μF, ±30%, 16V
C525	24473270	CD, 27pF
C526	24473270	CD, 27pF
C527	24473270	CD, 27pF
C528	24474102	CD, 1000pF, ±10%
C529	24473150	CD, 15pF
C530	24796220	EL, 22μF, ±20%, 35V
C531	24794100	EL, 10μF, ±20%, 16V
C532	24436101	CD, 100pF
C533	24436101	CD, 100pF
C534	24436101	CD, 100pF
C535	24797100	EL, 10μF, ±20%, 50V
C536	24797478	EL, 0.47μF, ±20%, 50V
C537	24794101	EL, 100μF, ±20%, 16V
C538	24353200	CD, 20pF
C539	24353330	CD, 33pF
C540	24436221	CD, 220pF
C541	24436221	CD, 220pF
C542	24436221	CD, 220pF
C543	24794220	EL, 22μF, ±20%, 16V
C603	24287103	Chip, 0.01μF, +80%, −20%
C606	24203330	EL, 33μF, ±20%, 16V
C607	24814103	Chip, 0.01μF, +80%, −20%
C620	24795102	EL, 1000μF, ±20%, 25V
C621	24795102	EL, 1000μF, ±20%, 25V

Location No.	Part No.	Description
C622	24795101	EL, 100μF, 25V
C623	24538184	PF, 0.18μF
C624	24590104	PF, 0.1μF
C625	24538184	PF, 0.18μF
C633	24590562	PF, 5600pF
C635	24794101	EL, 100μF, ±20%, 16V
C636	24797010	EL, 1μF, ±20%, 50V
C638	24797010	EL, 1μF, ±20%, 50V
C639	24795101	EL, 100μF, 25V
C640	24590562	PF, 5600pF
C642	24794101	EL, 100μF, ±20%, 16V
C643	24590104	PF, 0.1μF
C644	24797471	EL, 470μF, ±20%, 50V
C645	24590104	PF, 0.1μF
C646	24436101	CD, 100pF
C647	24436101	CD, 100pF
⚠ C801	24098999	PF, 0.1μF, ±20%, AC250V
⚠ C802	24098999	PF, 0.1μF, ±20%, AC250V
C803	24092281	CD, 4700pF, ±20%, AC250V
C804	24092281	CD, 4700pF, ±20%, AC250V
C805	24092281	CD, 4700pF, ±20%, AC250V
C806	24092281	CD, 4700pF, ±20%, AC250V
C810	24086856	EL, 270μF, ±20%, 400V
C811	24436101	CD, 100pF
C812	24436561	CD, 560pF
C813	24590682	PF, 6800pF
C814	24630747	EL, 22μF, ±20%, 25V
C815	24212102	CD, 1000pF, ±10%
C816	24092339	CD, 330pF, ±10%, 2kV
C818	24095931	PF, 2200pF, 1600V
C820	24797101	EL, 100μF, ±20%, 50V
C821	24436331	CD, 330pF
C823	24092336	CD, 180pF, ±10%, 2kV
C824	24086939	EL, 330μF, ±20%, 200V
C825	24232103	CD, 0.01μF, +80%, −20%
C827	24795102	EL, 1000μF, ±20%, 25V
C828	24214331	CD, 330pF, ±10%, 500V
C829	24797100	EL, 10μF, ±20%, 50V
C830	24797010	EL, 1μF, ±20%, 50V
C831	24709479	EL, 4.7μF, ±20%, 200V
C832	24795102	EL, 1000μF, ±20%, 25V
C833	24214331	CD, 330pF, ±10%, 500V
C834	24797222	EL, 2200μF, ±20%, 50V
C835	24436101	CD, 100pF
C837	24590103	PF, 0.01μF
C838	24797100	EL, 10μF, ±20%, 50V
C839	24538474	PF, 0.47μF
C840	24538474	PF, 0.47μF
C841	24214331	CD, 330pF, ±10%, 500V
C845	24666101	EL, 100μF, ±20%, 16V
C861	24762471	EL, 470μF, ±20%, 10V
C881	24094656	CD, 2200pF, ±20%, AC400V
C882	24094656	CD, 2200pF, ±20%, AC400V
C885	24598102	PF, 1000pF
C886	24436101	CD, 100pF
C887	24794470	EL, 47μF, ±20%, 16V
C901	24700479	EL, 4.7μF, ±20%, 250V
C902	24095923	PF, 4700pF, 1600V
C903	24212221	CD, 220pF, ±10%
CA11	24794100	EL, 10μF, ±20%, 16V
CA12	24794102	EL, 1000μF, 16V
CA13	24794100	EL, 10μF, ±20%, 16V
CA14	24232103	CD, 0.01μF, +80%, −20%
CA15	24474103	CD, 0.01μF, ±30%, 16V

Location No.	Part No.	Description
CA16	24794100	EL, 10μF, ±20%, 16V
CA29	24232103	CD, 0.01μF, +80%, −20%
CA31	24436300	CD, 30pF
CA32	24436300	CD, 30pF
CA33	24474102	CD, 1000pF, ±10%
CA36	24590104	PF, 0.1μF
CA70	24797010	EL, 1μF, ±20%, 50V
CA71	24212102	CD, 1000pF, ±10%
CA72	24212472	CD, 4700pF, ±10%
CA75	24436561	CD, 560pF
CA76	24794330	EL, 33μF, ±20%, 16V
CA77	24232103	CD, 0.01μF, +80%, −20%
CA78	24794100	EL, 10μF, ±20%, 16V
CA98	24797229	EL, 2.2μF, ±20%, 50V
CB01	24436101	CD, 100pF
CF01	24232103	CD, 0.01μF, +80%, −20%
CF02	24797100	EL, 10μF, ±20%, 50V
CF03	24474103	CD, 0.01μF, ±30%, 16V
CF04	24797100	EL, 10μF, ±20%, 50V
CF05	24353220	CD, 22pF
CF06	24353220	CD, 22pF
CF07	24232103	CD, 0.01μF, +80%, −20%
CF08	24590104	PF, 0.1μF
CF09	24085944	EL, 2.2μF, ±20%, 50V, Non-Polar
CF10	24206100	EL, 10μF, 50V
CF11	24474103	CD, 0.01μF, ±30%, 16V
CF15	24794470	EL, 47μF, ±20%, 16V
CF16	24353220	CD, 22pF
CF17	24797100	EL, 10μF, ±20%, 50V
CF18	24590103	PF, 0.01μF
CF19	24794101	EL, 100μF, ±20%, 16V
CF20	24436220	CD, 22pF
CF82	24795221	EL, 220μF, ±20%, 25V
CF83	24797470	EL, 47μF, ±20%, 50V
CF84	24794470	EL, 47μF, ±20%, 16V
CG02	24276470	Chip, 47pF
CG03	24781470	Chip, 47pF
CG05	24287103	Chip, 0.01μF, +80%, −20%
CG11	24814103	Chip, 0.01μF, +80%, −20%
CG12	24814103	Chip, 0.01μF, +80%, −20%
CG13	24203220	EL, 22μF, ±20%, 16V
CG14	24814103	Chip, 0.01μF, +80%, −20%
CG15	24774680	Chip, 68pF
CG16	24783220	Chip, 22pF
CG17	24781201	Chip, 200pF
CG18	24774150	Chip, 15pF
CG19	24287103	Chip, 0.01μF, +80%, −20%
CG20	24206010	EL, 1μF, 50V
CG21	24206010	EL, 1μF, 50V
CG22	24590152	PF, 1500pF
CG23	24590152	PF, 1500pF
CG24	24794471	EL, 470μF, ±20%, 16V
CG25	24206229	EL, 2.2μF, 50V
CG26	24206229	EL, 2.2μF, 50V
CG27	24590332	PF, 3300pF
CG28	24436681	CD, 680pF
CG29	24590104	PF, 0.1μF
CG30	24814103	Chip, 0.01μF, +80%, −20%
CG31	24590104	PF, 0.1μF
CG34	24590104	PF, 0.1μF
CG35	24538474	PF, 0.47μF
CG36	24538474	PF, 0.47μF
CG37	24206010	EL, 1μF, 50V

Location No.	Part No.	Description
CG38	24206010	EL, 1μF, 50V
CG39	24590153	PF, 0.015μF
CG40	24590153	PF, 0.015μF
CG41	24590473	PF, 0.047μF
CG42	24590473	PF, 0.047μF
CG43	24815103	Chip, 0.01μF, ±10%
CG44	24590103	PF, 0.01μF
CG45	24590102	PF, 1000pF
CG60	24794221	EL, 220μF, 16V
CG80	24781201	Chip, 200pF
CG81	24783220	Chip, 22pF
CG82	24774680	Chip, 68pF
CG83	24774150	Chip, 15pF
CG84	24814103	Chip, 0.01μF, +80%, −20%
CG85	24203470	EL, 47μF, ±20%, 16V
CG86	24814103	Chip, 0.01μF, +80%, −20%
CG90	24203100	EL, 10μF, ±20%, 16V
CH01	24796479	EL, 4.7μF, ±20%, 35V
CH02	24474101	CD, 100pF, ±10%
CH03	24796479	EL, 4.7μF, ±20%, 35V
CH04	24474101	CD, 100pF, ±10%
CH05	24474271	CD, 270pF, ±10%
CH06	24794100	EL, 10μF, ±20%, 16V
CH07	24473680	CD, 68pF
CH08	24473680	CD, 68pF
CH09	24474331	CD, 330pF, ±10%
CH10	24474221	CD, 220pF, ±10%
CH11	24474221	CD, 220pF, ±10%
CH12	24794100	EL, 10μF, ±20%, 16V
CH13	24538474	PF, 0.47μF
CH14	24794221	EL, 220μF, 16V
CH15	24797010	EL, 1μF, ±20%, 50V
CM01	24436201	CD, 200pF
CM02	24436201	CD, 200pF
CM05	24474103	CD, 0.01μF, ±30%, 16V
CM06	24357270	CD, 27pF
CM07	24590563	PF, 0.056μF
CM08	24474103	CD, 0.01μF, ±30%, 16V
CM09	24357200	CD, 20pF
CM10	24473270	CD, 27pF
CM14	24357200	CD, 20pF
CN10	24474101	CD, 100pF, ±10%
CN16	24590273	PF, 0.027μF
CV01	24474103	CD, 0.01μF, ±30%, 16V
CV02	24203100	EL, 10μF, ±20%, 16V
CV03	24794100	EL, 10μF, ±20%, 16V
CV04	24203100	EL, 10μF, ±20%, 16V
CV05	24474103	CD, 0.01μF, ±30%, 16V
CV06	24794100	EL, 10μF, ±20%, 16V
CV07	24797100	EL, 10μF, ±20%, 50V
CV08	24794100	EL, 10μF, ±20%, 16V
CV09	24474103	CD, 0.01μF, ±30%, 16V
CV10	24794100	EL, 10μF, ±20%, 16V
CV11	24794100	EL, 10μF, ±20%, 16V
CV12	24794100	EL, 10μF, ±20%, 16V
CV13	24794100	EL, 10μF, ±20%, 16V
CV14	24794100	EL, 10μF, ±20%, 16V
CV15	24794100	EL, 10μF, ±20%, 16V
CV20	24474102	CD, 1000pF, ±10%
CV21	24474102	CD, 1000pF, ±10%
CV22	24474102	CD, 1000pF, ±10%
CV23	24793471	EL, 470μF, ±20%, 10V
CV24	24797100	EL, 10μF, ±20%, 50V
CV25	24474102	CD, 1000pF, ±10%

Location No.	Part No.	Description
CV26	24793471	EL, 470μF, ±20%, 10V
CV27	24206339	EL, 3.3μF, 50V
CV29	24590104	PF, 0.1μF
CV30	24474102	CD, 1000pF, ±10%
CV31	24474102	CD, 1000pF, ±10%
CV32	24474102	CD, 1000pF, ±10%
CV33	24474102	CD, 1000pF, ±10%
CV36	24797100	EL, 10μF, ±20%, 50V
CV37	24203100	EL, 10μF, ±20%, 16V
CV38	24203101	EL, 100μF, ±20%, 16V
CV39	24276100	Chip, 10pF
CV47	24794101	EL, 100μF, ±20%, 16V
CV48	24666470	EL, 47μF, ±20%, 16V
CV51	24203101	EL, 100μF, ±20%, 16V
CV70	24794101	EL, 100μF, ±20%, 16V
CV71	24232103	CD, 0.01μF, +80%, −20%
CV72	24203100	EL, 10μF, ±20%, 16V
CV73	24474820	CD, 82pF, ±10%
CV82	24794100	EL, 10μF, ±20%, 16V
CV83	24794100	EL, 10μF, ±20%, 16V
CV85	24203100	EL, 10μF, ±20%, 16V
CV86	24203100	EL, 10μF, ±20%, 16V
CV96	24206010	EL, 1μF, 50V
CV97	24206010	EL, 1μF, 50V
CV98	24590562	PF, 5600pF
CV99	24590562	PF, 5600pF
CX02	24538474	PF, 0.47μF
CX03	24538474	PF, 0.47μF
CX04	24538474	PF, 0.47μF
CY51	24797010	EL, 1μF, ±20%, 50V
CY52	24797010	EL, 1μF, ±20%, 50V
CY53	24797010	EL, 1μF, ±20%, 50V
CY54	24797010	EL, 1μF, ±20%, 50V
CY55	24797010	EL, 1μF, ±20%, 50V
CY56	24797010	EL, 1μF, ±20%, 50V
CY57	24206010	EL, 1μF, 50V
CY58	24206010	EL, 1μF, 50V
CY59	24206010	EL, 1μF, 50V
CY60	24797010	EL, 1μF, ±20%, 50V
CY61	24797010	EL, 1μF, ±20%, 50V
CY62	24797010	EL, 1μF, ±20%, 50V
CY63	24793221	EL, 220μF, ±20%, 10V
CY64	24590104	PF, 0.1μF
RESISTORS		
R101	24872122	Chip, 1200 ohm, 1/16W
R102	24871100	Chip, 10 ohm, 1/8W
R103	24872824	Chip, 820k ohm, 1/16W
R104	24872102	Chip, 1000 ohm, 1/16W
R105	24872104	Chip, 100k ohm, 1/16W
R106	24872682	Chip, 6800 ohm, 1/16W
R107	24872391	Chip, 390 ohm, 1/16W
R108	24872561	Chip, 560 ohm, 1/16W
R110	24872562	Chip, 5600 ohm, 1/16W
R111	24872472	Chip, 47 ohm, 1/16W
R112	24872182	Chip, 1800 ohm, 1/16W
R113	24872220	Chip, 22 ohm, 1/16W
R118	24871151	Chip, 150 ohm, 1/8W
R119	24872131	Chip, 130 ohm, 1/16W
R120	24872151	Chip, 150 ohm, 1/16W
R122	24872121	Chip, 120 ohm, 1/16W
R124	24871181	Chip, 180 ohm, 1/8W
R125	24552271	OMF, 270 ohm, 1/2W
R126	24553680	OMF, 68 ohm, 1W

Location No.	Part No.	Description
R128	24871104	Chip, 100k ohm, 1/8W
R151	24066599	VR, 5k ohm, 1/10W
R153	24066606	VR, 1M ohm, 1/10W
R170	24872102	Chip, 1000 ohm, 1/16W
R171	24872334	Chip, 330k ohm, 1/16W
R201	24366122	CF, 1200 ohm
R202	24366471	CF, 470 ohm
R203	24366472	CF, 4700 ohm
R204	24366152	CF, 1500 ohm
R205	24366471	CF, 470 ohm
R206	24871471	Chip, 470 ohm, 1/8W
R207	24872101	Chip, 100 ohm, 1/16W
R208	24552471	OMF, 470 ohm, 1/2W
R209	24871272	Chip, 2700 ohm, 1/8W
R210	24871101	Chip, 100 ohm, 1/8W
R211	24366102	CF, 1k ohm
R212	24366103	CF, 10k ohm
R213	24366152	CF, 1500 ohm
R214(U101)	24872102	Chip, 1000 ohm, 1/16W
R214(U902)	24366122	CF, 1200 ohm
R219	24366472	CF, 4700 ohm
R220	24366223	CF, 22k ohm
R221	24366223	CF, 22k ohm
R222	24366301	CF, 300 ohm
R223	24366242	CF, 2400 ohm
R224	24366512	CF, 5100 ohm
R225	24366222	CF, 2200 ohm
R226	24366123	CF, 12k ohm
R227	24366302	CF, 3k ohm
R228	24366681	CF, 680 ohm
R229	24366152	CF, 1500 ohm
R230	24366152	CF, 1500 ohm
R231	24366182	CF, 1800 ohm
R242	24366123	CF, 12k ohm
R243	24366153	CF, 15k ohm
R252	24066597	VR, 1k ohm, 1/10W
R253	24066597	VR, 1k ohm, 1/10W
R260	24871332	Chip, 3300 ohm, 1/8W
R261	24000576	Chip Jumper, 3216 type
R301	24366301	CF, 300 ohm
R302	24366244	CF, 240k ohm
R303	24366102	CF, 1k ohm
R304	24366203	CF, 20k ohm
R305	24366161	CF, 160 ohm
R306	24553470	OMF, 47 ohm, 1W
R307	24552561	OMF, 560 ohm, 1/2W
R316	24383271	OMF, 270 ohm, 2W
R317	24366102	CF, 1k ohm
R318	24366623	CF, 62k ohm
R319	24383471	OMF, 470 ohm, 2W
R321	24366123	CF, 12k ohm
R322	24366683	CF, 68k ohm
R323	24322119	OMF, 1.1 ohm, 1W
⚠ R327	24547479	FR, 4.7 ohm, 1W
R334	24383751	OMF, 750 ohm, 2W
R370	24366164	CF, 160k ohm
R371	24366471	CF, 470 ohm
R372	24366471	CF, 470 ohm
R374	24366223	CF, 22k ohm
R375	24366105	CF, 1M ohm
R376	24366564	CF, 560k ohm
R377	24366104	CF, 100k ohm
R378	24366204	CF, 200k ohm
R380	24366562	CF, 5600 ohm

Location No.	Part No.	Description
R840	24366105	CF, 1M ohm
R841	24366103	CF, 10k ohm
R842	24000900	FR, 0.47 ohm, ±10%, 1W
R843	24366103	CF, 10k ohm
R844	24366105	CF, 1M ohm
R845	24366392	CF, 3900 ohm
R846	24366562	CF, 5600 ohm
R847	24553473	OMF, 47k ohm, 1W
R849	24366272	CF, 2700 ohm
R861	24007554	Cement, 6800 ohm, 5W
R862	24383163	OMF, 16k ohm, 2W
R863	24366103	CF, 10k ohm
R871	24366103	CF, 10k ohm
R872	24366103	CF, 10k ohm
R873	24366103	CF, 10k ohm
R874	24366103	CF, 10k ohm
R875	24366562	CF, 5600 ohm
R877	24366102	CF, 1k ohm
R878	24366103	CF, 10k ohm
R880	24366682	CF, 6800 ohm
R882	24366513	CF, 51k ohm
R883	24366103	CF, 10k ohm
R884	24366103	CF, 10k ohm
R885	24366103	CF, 10k ohm
R886	24366103	CF, 10k ohm
⚠ R890	24000630	PTC Thermistor, Dual
R901	24946272	CC, 2700 ohm, ±10%, 1/2W
R902	24946272	CC, 2700 ohm, ±10%, 1/2W
R903	24946272	CC, 2700 ohm, ±10%, 1/2W
R920	24000929	FR, 1.5 ohm, 2W
RA01	24366183	CF, 18k ohm
RA02	24366562	CF, 5600 ohm
RA03	24366103	CF, 10k ohm
RA04	24366473	CF, 47k ohm
RA05	24366473	CF, 47k ohm
RA06	24366473	CF, 47k ohm
RA07	24366222	CF, 2200 ohm
RA08	24366101	CF, 100 ohm
RA10	24366104	CF, 100k ohm
RA11	24366103	CF, 10k ohm
RA13	24366102	CF, 1k ohm
RA14	24366473	CF, 47k ohm
RA15	24366103	CF, 10k ohm
RA17	24366103	CF, 10k ohm
RA18	24366103	CF, 10k ohm
RA19	24366102	CF, 1k ohm
RA20	24366103	CF, 10k ohm
RA21	24366561	CF, 560 ohm
RA22	24366561	CF, 560 ohm
RA23	24366103	CF, 10k ohm
RA29	24366103	CF, 10k ohm
RA32	24366473	CF, 47k ohm
RA33	24366473	CF, 47k ohm
RA37	24366473	CF, 47k ohm
RA45	24366183	CF, 18k ohm
RA46	24366123	CF, 12k ohm
RA47	24366152	CF, 1500 ohm
RA48	24366473	CF, 47k ohm
RA56	24366123	CF, 12k ohm
RA57	24366392	CF, 3900 ohm
RA58	24366152	CF, 1500 ohm
RA59	24366392	CF, 3900 ohm
RA60	24366392	CF, 3900 ohm
RA61	24366102	CF, 1k ohm

Location No.	Part No.	Description
RA62	24366103	CF, 10k ohm
RA63	24366103	CF, 10k ohm
RA66	24366102	CF, 1k ohm
RA67	24366153	CF, 15k ohm
RA70	24366561	CF, 560 ohm
RA71	24366564	CF, 560k ohm
RA72	24366563	CF, 56k ohm
RA73	24366123	CF, 12k ohm
RA74	24366392	CF, 3900 ohm
RA75	24366103	CF, 10k ohm
RA76	24366473	CF, 47k ohm
RA79	24366153	CF, 15k ohm
RA81	24366101	CF, 100 ohm
RA82	24366101	CF, 100 ohm
RA83	24366103	CF, 10k ohm
RA84	24366103	CF, 10k ohm
RA85	24366103	CF, 10k ohm
RA86	24366103	CF, 10k ohm
RA87	24366103	CF, 10k ohm
RA89	24366471	CF, 470 ohm
RA90	24366391	CF, 390 ohm
RA91	24366223	CF, 22k ohm
RA92	24366473	CF, 47k ohm
RA93	24366391	CF, 390 ohm
RA95	24366473	CF, 47k ohm
RA96	24366102	CF, 1k ohm
RA97	24366101	CF, 100 ohm
RA98	24366101	CF, 100 ohm
RB01	24366103	CF, 10k ohm
RB02	24366332	CF, 3300 ohm
RB03	24366103	CF, 10k ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366473	CF, 47k ohm
RB11	24366331	CF, 330 ohm
RB12	24366331	CF, 330 ohm
RF03	24366100	CF, 10 ohm
RF04	24366273	CF, 27k ohm
RF05	24366472	CF, 4700 ohm
RF06	24366103	CF, 10k ohm
RF07	24366103	CF, 10k ohm
RF08	24366101	CF, 100 ohm
RF09	24366101	CF, 100 ohm
RF11	24366272	CF, 2700 ohm
RF12	24366103	CF, 10k ohm
RF13	24366101	CF, 100 ohm
RF14	24366101	CF, 100 ohm
RF15	24366392	CF, 3900 ohm
RF16	24366682	CF, 6800 ohm
RF17	24366332	CF, 3300 ohm
RF18	24366682	CF, 6800 ohm
RF19	24366101	CF, 100 ohm
RF80	24546279	FR, 2.7 ohm, 1/2W
RF81	24383153	OMF, 15k ohm, 2W
RF83	24546279	FR, 2.7 ohm, 1/2W
RF84	24366122	CF, 1200 ohm
RG02	24872361	Chip, 360 ohm, 1/16W
RG04	24872563	Chip, 56k ohm, 1/16W
RG05	24872563	Chip, 56k ohm, 1/16W
RG06	24872102	Chip, 1000 ohm, 1/16W
RG07	24872102	Chip, 1000 ohm, 1/16W
RG08	24872332	Chip, 3300 ohm, 1/16W
RG10	24872153	Chip, 15k ohm, 1/16W
RG11	24872102	Chip, 1000 ohm, 1/16W

Location No.	Part No.	Description
R381	24366102	CF, 1k ohm
R390	24366273	CF, 27k ohm
R402	24366273	CF, 27k ohm
R403	24366302	CF, 3k ohm
R404	24552432	OMF, 4300 ohm, 1/2W
R405	24366431	CF, 430 ohm
R408	24366682	CF, 6800 ohm
R409	24366434	CF, 430k ohm
R410	24552472	OMF, 4700 ohm, 1/2W
R411	24366361	CF, 360 ohm
R412	24366221	CF, 220 ohm
R416	24007620	Cement, 4300 ohm, 5W
R418	24553432	OMF, 4300 ohm, 1W
R419	24942510	CC, 51 ohm, 1/2W
R420	24553102	OMF, 1k ohm, 1W
R422	24366102	CF, 1k ohm
R423	24366102	CF, 1k ohm
R424	24366103	CF, 10k ohm
R425	24547399	FR, 3.9 ohm, 1W
R427	24366392	CF, 3900 ohm
R440	24552103	OMF, 10k ohm, 1/2W
R441	24376513	CF, 51k ohm, 1/2W
⚠ R444	24323828	OMF, 0.82 ohm, 2W
R446	24532151	FR, 150 ohm, 1W
⚠ R448	24323338	OMF, 0.33 ohm, 2W
R502	24366334	CF, 330k ohm
R504	24366391	CF, 390 ohm
R507	24366822	CF, 8200 ohm
R508	24366391	CF, 390 ohm
R509	24366122	CF, 1200 ohm
R510	24366332	CF, 3300 ohm
R511	24366202	CF, 2k ohm
R512	24366182	CF, 1800 ohm
R513	24366122	CF, 1200 ohm
R514	24366223	CF, 22k ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R518	24366223	CF, 22k ohm
R519	24366475	CF, 4.7M ohm
R521	24366102	CF, 1k ohm
R522	24366185	CF, 1.8M ohm
R527	24366821	CF, 820 ohm
R528	24366681	CF, 680 ohm
R529	24366101	CF, 100 ohm
R530	24366101	CF, 100 ohm
R532	24366102	CF, 1k ohm
R533	24366162	CF, 1600 ohm
R535	24366471	CF, 470 ohm
R537	24366162	CF, 1600 ohm
R538	24366471	CF, 470 ohm
R539	24366162	CF, 1600 ohm
R541	24366821	CF, 820 ohm
R542	24366241	CF, 240 ohm
R543	24366103	CF, 10k ohm
R544	24366101	CF, 100 ohm
R545	24366102	CF, 1k ohm
R546	24366333	CF, 33k ohm
R547	24366102	CF, 1k ohm
R548	24366102	CF, 1k ohm
R549	24366102	CF, 1k ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24066600	VR, 10k ohm, 1/10W
R558	24066600	VR, 10k ohm, 1/10W

Location No.	Part No.	Description
R559	24066600	VR, 10k ohm, 1/10W
R565	24366560	CF, 56 ohm
R566	24366560	CF, 56 ohm
R567	24366560	CF, 56 ohm
R568	24366102	CF, 1k ohm
R570	24366272	CF, 2700 ohm
R571	24366272	CF, 2700 ohm
R572	24366272	CF, 2700 ohm
R580	24366241	CF, 240 ohm
R581	24366471	CF, 470 ohm
R591	24383153	OMF, 15k ohm, 2W
R592	24383153	OMF, 15k ohm, 2W
R593	24383153	OMF, 15k ohm, 2W
R601	24872242	Chip, 2400 ohm, 1/16W
R602	24872183	Chip, 18k ohm, 1/16W
R603	24872202	Chip, 2000 ohm, 1/16W
R604	24872271	Chip, 270 ohm, 1/16W
R605	24553430	OMF, 43 ohm, 1W
R606	24872821	Chip, 820 ohm, 1/16W
R607	24872430	Chip, 43 ohm, 1/16W
R614	24872271	Chip, 270 ohm, 1/16W
R630	24366332	CF, 3300 ohm
R631	24366332	CF, 3300 ohm
R638	24366432	CF, 4300 ohm
R640	24366222	CF, 2200 ohm
R641	24366432	CF, 4300 ohm
R643	24366222	CF, 2200 ohm
R644	24321229	OMF, 2.2 ohm, 1/2W
R645	24321229	OMF, 2.2 ohm, 1/2W
R646	24366223	CF, 22k ohm
R647	24366223	CF, 22k ohm
R649	24366913	CF, 91k ohm
R665	24552181	OMF, 180 ohm, 1/2W
R666	24552181	OMF, 180 ohm, 1/2W
R668	24366103	CF, 10k ohm
R669	24366101	CF, 100 ohm
R670	24366223	CF, 22k ohm
R675	24366101	CF, 100 ohm
R676	24366101	CF, 100 ohm
R801	24004914	CC, 5.6M ohm, 1/2W
⚠ R802	24007857	Cement, 6.2 ohm, 15W
R810	24377274	CF, 270k ohm, 1W
R811	24366103	CF, 10k ohm
R812	24366102	CF, 1k ohm
R813	24366102	CF, 1k ohm
R814	24366823	CF, 82k ohm
R815	24366221	CF, 220 ohm
R816	24367471	CF, 470 ohm, ±2%
R817	24321398	OMF, 0.39 ohm, 1/2W
R818	24384153	OMF, 15k ohm, 3W
R819	24366689	CF, 6.8 ohm
R820	24552102	OMF, 1k ohm, 1/2W
R821	24007743	Cement, 180 ohm, 10W
R822	24366390	CF, 39 ohm
R824	24366123	CF, 12k ohm
R825	24381220	OMF, 22 ohm, 1/2W
R826	24366102	CF, 1k ohm
R827	24366102	CF, 1k ohm
R830	24383303	OMF, 30k ohm, 2W
R831	24384123	OMF, 12k ohm, 3W
R836	24321228	OMF, 0.22 ohm, 1/2W
R837	24546109	FR, 1 ohm, 1/2W
R838	24383102	OMF, 1k ohm, 2W
R839	24366103	CF, 10k ohm

Location No.	Part No.	Description
RG14	24872223	Chip, 22k ohm, 1/16W
RG19	24872103	Chip, 10k ohm, 1/16W
RG31	24872101	Chip, 100 ohm, 1/16W
RG32	24872101	Chip, 100 ohm, 1/16W
RG34	24872562	Chip, 5600 ohm, 1/16W
RG35	24872432	Chip, 4300 ohm, 1/16W
RG36	24872472	Chip, 47 ohm, 1/16W
RG37	24872563	Chip, 56k ohm, 1/16W
RG38	24872101	Chip, 100 ohm, 1/16W
RG40	24872101	Chip, 100 ohm, 1/16W
RG42	24872101	Chip, 100 ohm, 1/16W
RG44	24872101	Chip, 100 ohm, 1/16W
RG45	24872512	Chip, 5100 ohm, 1/16W
RG46	24872512	Chip, 5100 ohm, 1/16W
RG47	24872272	Chip, 2700 ohm, 1/16W
RG50	24066926	VR, 10k ohm, 1/10W
RG60	24553101	OMF, 100 ohm, 1W
RG61	24872152	Chip, 1500 ohm, 1/16W
RG62	24872102	Chip, 1000 ohm, 1/16W
RG63	24872222	Chip, 2200 ohm, 1/16W
RG64	24872273	Chip, 27k ohm, 1/16W
RG65	24872133	Chip, 13k ohm, 1/16W
RG66	24872152	Chip, 1500 ohm, 1/16W
RG67	24872273	Chip, 27k ohm, 1/16W
RG68	24872133	Chip, 13k ohm, 1/16W
RG69	24871102	Chip, 1k ohm, 1/8W
RG70	24872222	Chip, 2200 ohm, 1/16W
RG81	24872152	Chip, 1500 ohm, 1/16W
RG82	24872162	Chip, 1600 ohm, 1/16W
RG83	24872153	Chip, 15k ohm, 1/16W
RG84	24872102	Chip, 1000 ohm, 1/16W
RG85	24872471	Chip, 470 ohm, 1/16W
RH01	24366102	CF, 1k ohm
RH02	24366752	CF, 7500 ohm
RH03	24366102	CF, 1k ohm
RH04	24366681	CF, 680 ohm
RH05	24366183	CF, 18k ohm
RH06	24366223	CF, 22k ohm
RH07	24366101	CF, 100 ohm
RH08	24366112	CF, 1100 ohm
RH09	24366272	CF, 2700 ohm
RH10	24366272	CF, 2700 ohm
RH11	24366222	CF, 2200 ohm
RH12	24366112	CF, 1100 ohm
RH13	24366101	CF, 100 ohm
RH14	24366302	CF, 3k ohm
RH15	24366912	CF, 9100 ohm
RH16	24366472	CF, 4700 ohm
RH17	24366272	CF, 2700 ohm
RH18	24546919	FR, 9.1 ohm, 1/2W
RH19	24367122	CF, 1200 ohm, ±2%
RH20	24366273	CF, 27k ohm
RH21	24366183	CF, 18k ohm
RM03	24366272	CF, 2700 ohm
RM04	24366432	CF, 4300 ohm
RM05	24366221	CF, 220 ohm
RM06	24366271	CF, 270 ohm
RM07	24366475	CF, 4.7M ohm
RM08	24366333	CF, 33k ohm
RN08	24366103	CF, 10k ohm
RN10	24366562	CF, 5600 ohm
RN32	24366243	CF, 24k ohm
RV02	24366101	CF, 100 ohm
RV03	24366101	CF, 100 ohm

Location No.	Part No.	Description
RV04	24366101	CF, 100 ohm
RV05	24366101	CF, 100 ohm
RV06	24366101	CF, 100 ohm
RV07	24366101	CF, 100 ohm
RV08	24366101	CF, 100 ohm
RV09	24366101	CF, 100 ohm
RV10	24366101	CF, 100 ohm
RV11	24366101	CF, 100 ohm
RV12	24366101	CF, 100 ohm
RV13	24366101	CF, 100 ohm
RV14	24366101	CF, 100 ohm
RV15	24366101	CF, 100 ohm
RV18	24366104	CF, 100k ohm
RV19	24366104	CF, 100k ohm
RV20	24366104	CF, 100k ohm
RV21	24366104	CF, 100k ohm
RV22	24366104	CF, 100k ohm
RV23	24366104	CF, 100k ohm
RV24	24366471	CF, 470 ohm
RV26	24366680	CF, 68 ohm
RV33	24871561	Chip, 560 ohm, 1/8W
RV34(U101)	24872102	Chip, 1000 ohm, 1/16W
RV34(U902)	24366102	CF, 1k ohm
RV35	24872471	Chip, 470 ohm, 1/16W
RV36	24872103	Chip, 10k ohm, 1/16W
RV37	24872332	Chip, 3300 ohm, 1/16W
RV39	24366910	CF, 91 ohm
RV40	24366680	CF, 68 ohm
RV41	24366103	CF, 10k ohm
RV42	24366750	CF, 75 ohm
RV43	24366750	CF, 75 ohm
RV44	24366750	CF, 75 ohm
RV45	24366750	CF, 75 ohm
RV51	24552101	OMF, 100 ohm, 1/2W
RV52	24872102	Chip, 1000 ohm, 1/16W
RV53	24871101	Chip, 100 ohm, 1/8W
RV56	24552161	OMF, 160 ohm, 1/2W
RV60	24552101	OMF, 100 ohm, 1/2W
RV69	24366102	CF, 1k ohm
RV70	24366471	CF, 470 ohm
RV73	24366910	CF, 91 ohm
RV74	24366103	CF, 10k ohm
RV75	24366821	CF, 820 ohm
RV76	24366201	CF, 200 ohm
RV77	24366101	CF, 100 ohm
RV78	24366101	CF, 100 ohm
RV79	24552391	OMF, 390 ohm, 1/2W
RV80	24366102	CF, 1k ohm
RV81	24366101	CF, 100 ohm
RV82	24366621	CF, 620 ohm
RV83	24366621	CF, 620 ohm
RV84	24366621	CF, 620 ohm
RV85	24366621	CF, 620 ohm
RV86	24366471	CF, 470 ohm
RW04	24366101	CF, 100 ohm
RW07	24366101	CF, 100 ohm
RW21	24366471	CF, 470 ohm
RW22	24366471	CF, 470 ohm
RW24	24366471	CF, 470 ohm
RW25	24366471	CF, 470 ohm
RW26	24366104	CF, 100k ohm
RW28	24366472	CF, 4700 ohm
RW29	24366104	CF, 100k ohm
RW80	24366101	CF, 100 ohm

Location No.	Part No.	Description
RW81	24366101	CF, 100 ohm
RW83	24552161	OMF, 160 ohm, 1/2W
RY01	24366473	CF, 47k ohm
RY02	24366183	CF, 18k ohm
RY03	24366391	CF, 390 ohm
RY04	24366473	CF, 47k ohm
RY51	24366101	CF, 100 ohm
RY52	24366101	CF, 100 ohm
RY53	24366101	CF, 100 ohm
RY54	24366101	CF, 100 ohm
RY55	24366181	CF, 180 ohm
RY56	24366181	CF, 180 ohm
RY57	24366181	CF, 180 ohm
RY61	24366152	CF, 1500 ohm
RY62	24366511	CF, 510 ohm
RY63	24366101	CF, 100 ohm
RY64	24366101	CF, 100 ohm
RY65	24366101	CF, 100 ohm
RY66	24366122	CF, 1200 ohm
RY67	24366122	CF, 1200 ohm
RY68	24366122	CF, 1200 ohm
COILS & TRANSFORMERS		
L101	23262819	Coil, PIF, TRF1071D
L102	23238704	Coil, Peaking, TRF4680AJ
L103	23238704	Coil, Peaking, TRF4680AJ
L104	23262650	Coil, IF, TRF1149D
L107	23262951	Coil, RF Choke, TRF1019
L108	23238558	Coil, Peaking, TRF4R47AJ
L151	23262783	Coil, IF, TRF1105
L152	23262813	Coil, IF, TRF1077D
L201	23238714	Coil, Peaking, TRF4100AJ
L202	23238718	Coil, Peaking, TRF4479AJ
L203	23238914	Coil, Peaking, TRF4470AC
L204	23238714	Coil, Peaking, TRF4100AJ
L208	23238704	Coil, Peaking, TRF4680AJ
L220	23238706	Coil, Peaking, TRF4470AJ
L221	23238709	Coil, Peaking, TRF4270AJ
L222	23238710	Coil, Peaking, TRF4220AJ
L311	23103859	Coil (Ferrite Bead), TEM2011
L315	23238714	Coil, Peaking, TRF4100AJ
L370	23238702	Coil, Peaking, TRF4101AJ
L405	23221685	Coil, Choke, TLN3193
L406	23103859	Coil (Ferrite Bead), TEM2011
L411	23233097	Coil, Linearity, TLN2149G
L412	23221936	Coil, Choke, TLN3041
L421	23211897	Coil, Choke, AT4043/100T
L422	23221738	Coil, Choke, TLN3132D
L423	23211896	Coil, Choke, AT4043/60T
⚠ L462	.....	DY, Supplied with V901
L503	23238714	Coil, Peaking, TRF4100AJ
L525	23238708	Coil, Peaking, TRF4330AJ
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L590	23289221	Coil, Peaking, TRF4221AF
L591	23238714	Coil, Peaking, TRF4100AJ
L601	23238714	Coil, Peaking, TRF4100AJ
L801	23221077	Coil, Choke, TLN1015S
L802	23103859	Coil (Ferrite Bead), TEM2011
L803	23221747	Coil, Choke, TRF9253D
L804	23221747	Coil, Choke, TRF9253D
L806	23103859	Coil (Ferrite Bead), TEM2011
L829	23238714	Coil, Peaking, TRF4100AJ
L830	23222694	Coil, Width, TLN2026

Location No.	Part No.	Description
L833	23222694	Coil, Width, TLN2026
L834	23103859	Coil (Ferrite Bead), TEM2011
⚠ L901	23200202	Coil, Degaussing, TSB-2329AR
LA01	23238562	Coil, Peaking, TRF4109AJ
LA12	23221803	Coil, Choke, TLN3040D
LB01	23262001	Coil, IF, TRF1166D
LF01	23238712	Coil, Peaking, TRF4150AJ
LF02	23238712	Coil, Peaking, TRF4150AJ
LF03	23238720	Coil, Peaking, TRF4339AJ
LF04	23238562	Coil, Peaking, TRF4109AJ
LF05	23238714	Coil, Peaking, TRF4100AJ
LF06	23238714	Coil, Peaking, TRF4100AJ
LF07	23238714	Coil, Peaking, TRF4100AJ
LF08	23238714	Coil, Peaking, TRF4100AJ
LF09	23238506	Coil, Peaking, TRF4229AJ
LF10	23238506	Coil, Peaking, TRF4229AJ
LF11	23103859	Coil (Ferrite Bead), TEM2011
LF12	23238506	Coil, Peaking, TRF4229AJ
LF13	23238714	Coil, Peaking, TRF4100AJ
LF15	23103859	Coil (Ferrite Bead), TEM2011
LF83	23222694	Coil, Width, TLN2026
LF84	23222694	Coil, Width, TLN2026
LG01	23262808	Coil, IF, TRF1082
LG04	23238713	Coil, Peaking, TRF4120AJ
LG05	23232946	Coil, Variable, TRF3073D
LG80	23232946	Coil, Variable, TRF3073D
LM01	23262797	Coil, IF, TRF1093D
LM02	23262002	Coil, IF, TRF1167D
LM03	23262002	Coil, IF, TRF1167D
LM04	23262798	Coil, IF, TRF1092D
LV01	23238710	Coil, Peaking, TRF4220AJ
LV03	23238714	Coil, Peaking, TRF4100AJ
⚠ T401	23224997	Transformer, Horiz. Drive, TLN1027
⚠ T461	23236404	Transformer, Flyback, AT2078/25
T801	23211891	Line Filter, TRF3164
⚠ T803	23217110	Transformer, Converter, 47317550
TN01	23232002	Coil, Variable, TRF3520D
TN02	23262843	Coil, PIF Trap, TRF1457D
SEMICONDUCTORS		
IC101	23318439	IC, M52008P
IC303	23119142	IC, AN5521
IC371	B0383680	IC, TA8739P
IC408	23319203	IC, MC7812CT
IC501	B0383970	IC, TA8783N
IC605	23318413	IC, LA4282
IC801	23318232	IC, TDA4601
IC805	23318299	IC, L78MR05-FA
IC833	23319305	IC, SE140N LF4
ICA01	23319614	IC, CXP80420-121
ICA07	23319016	IC, μPD6254CX
ICF02	23319143	IC, SAA5246P/E
ICF03	23319001	IC, IMS1630LP12
ICG01	23318023	IC, TDA6611
ICG03	B0325290	IC, TA7337P
ICG30	B0325290	IC, TA7337P
ICV01	B0383940	IC, TA8777N
ICV22	B0370110	IC, TA78L09S
ICV23	B0370110	IC, TA78L09S
ICY50	B0383930	IC, TA8775N

Location No.	Part No.	Description
Q102	A6357139	Transistor, 2SC3125 FA-6
Q103	A6357139	Transistor, 2SC3125 FA-6
Q202	23114691	Transistor, BC557A
Q203	A6335477	Transistor, 2SC2712-Y
Q204	A6534040	Transistor, 2SA1015-Y
Q206	23114689	Transistor, BC547A
Q207	23114689	Transistor, BC547A
Q208	23114689	Transistor, BC547A
Q220	23114689	Transistor, BC547A
Q402	A678971D	Transistor, 2SC1569 FA-5
⚠ Q404	23314376	Transistor, ON4408
Q421	23114632	Transistor, BC547B
Q422	A6358055	Transistor, 2SC3182N FA-1
Q505	A6363200	Transistor, 2SC3619
Q506	23114689	Transistor, BC547A
Q507	A6363200	Transistor, 2SC3619
Q508	23114689	Transistor, BC547A
Q509	A6363200	Transistor, 2SC3619
Q510	23114689	Transistor, BC547A
Q512	23114689	Transistor, BC547A
Q514	23114688	Transistor, BC327
Q516	23114689	Transistor, BC547A
Q546	23114689	Transistor, BC547A
Q601	A6335477	Transistor, 2SC2712-Y
Q602	A6335477	Transistor, 2SC2712-Y
Q604	23114691	Transistor, BC557A
Q609	A6342200	Transistor, 2SC2878-A
Q610	A6342200	Transistor, 2SC2878-A
Q802	A6868767	Transistor, 2SD1428
Q810	23114632	Transistor, BC547B
Q811	23114632	Transistor, BC547B
Q812	A6342200	Transistor, 2SC2878-A
Q813	23114632	Transistor, BC547B
Q815	23114632	Transistor, BC547B
Q816	23114632	Transistor, BC547B
Q817	23114632	Transistor, BC547B
Q840	23114546	Transistor, BC557B
Q841	A6547250	Transistor, 2SA1320
Q842	A6325067	Transistor, 2SC2230A-Y
Q843	A6547303	Transistor, 2SA1321
Q844	23114546	Transistor, BC557B
Q845	23314246	Transistor, 2SC2023 LF-4
QA02	A6342200	Transistor, 2SC2878-A
QA03	23114689	Transistor, BC547A
QA04	23114689	Transistor, BC547A
QA06	23114689	Transistor, BC547A
QA10	23114689	Transistor, BC547A
QA11	23114691	Transistor, BC557A
QA12	A6342200	Transistor, 2SC2878-A
QA90	23114689	Transistor, BC547A
QB01	23114689	Transistor, BC547A
QB02	23114689	Transistor, BC547A
QF04	23114689	Transistor, BC547A
QF05	23114689	Transistor, BC547A
QF80	A6842185	Transistor, 2SD553-Y
QF81	A6842185	Transistor, 2SD553-Y
QG02	A6335477	Transistor, 2SC2712-Y
QG08	A6335477	Transistor, 2SC2712-Y
QG09	A6335477	Transistor, 2SC2712-Y
QG10	A6335477	Transistor, 2SC2712-Y
QG11	A6335477	Transistor, 2SC2712-Y
QG12	A6335477	Transistor, 2SC2712-Y
QH02	23114691	Transistor, BC557A
QH03	23114689	Transistor, BC547A

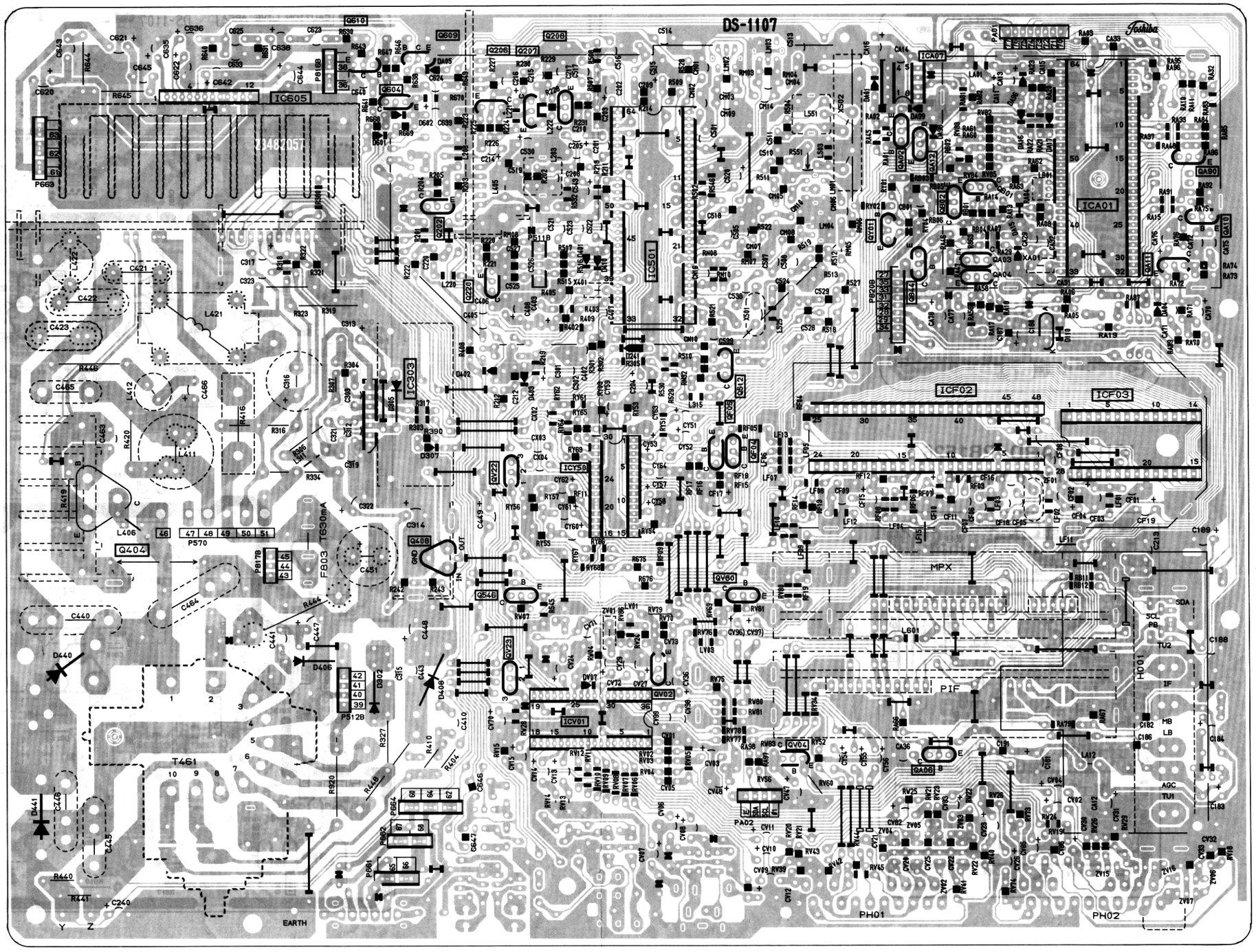
Location No.	Part No.	Description
QH04	23114689	Transistor, BC547A
QH05	23114689	Transistor, BC547A
QV02	23114691	Transistor, BC557A
QV04	23118980	Transistor, BC337
QV30	A6541130	Transistor, 2SA1162-Y
QV50	A6357139	Transistor, 2SC3125 FA-6
QV80	23114689	Transistor, BC547A
QY01	A6734585	Transistor, 2SC752GTM-O
D110	23115878	Diode, Zener, μPC574J(L)
D241	A7150041	Diode, 1SS104
D302	23118479	Diode, BYD33J
D305	23118479	Diode, BYD33J
D307	23115599	Diode, 1N4148
D370	23115599	Diode, 1N4148
D401	23316325	Diode, Zener, UZ9.1BSC
D402	23316367	Diode, Zener, UZ33BS, B
D403	23316333	Diode, Zener, UZ12BSB
D406	23118479	Diode, BYD33J
D408	23118052	Diode, RU4Z
D410	A7116815	Diode, Zener, 04AZ8.2Y
D440	23118995	Diode, BY228
D441	23118994	Diode, BYW95C
D594	23115599	Diode, 1N4148
D595	23115599	Diode, 1N4148
D596	23115599	Diode, 1N4148
D601	23115599	Diode, 1N4148
D602	23115599	Diode, 1N4148
D801	23118173	Diode, RBV-406M-LFA
D805	23118479	Diode, BYD33J
D807	23118479	Diode, BYD33J
D808	23118736	Diode, BYV96E
D809	23118451	Diode, RU4A
D810	23118052	Diode, RU4Z
D811	23118479	Diode, BYD33J
D812	23316337	Diode, Zener, UZ13BSC
D813	23118479	Diode, BYD33J
D814	A8643106	Photo Coupler, TLP621(GR)
D815	23115599	Diode, 1N4148
D830	A8643106	Photo Coupler, TLP621(GR)
D832	23316289	Diode, Zener, uZ2.7BSB
D834	A7275400	Diode, 1S2462
D835	23118052	Diode, RU4Z
D836	23118052	Diode, RU4Z
D841	A7275400	Diode, 1S2462
D842	A7275400	Diode, 1S2462
D845	23115599	Diode, 1N4148
DA01	A7116425	Diode, Zener, 04AZ5.6Z
DA04	23115599	Diode, 1N4148
DA05	23115599	Diode, 1N4148
DA15	A7116515	Diode, Zener, 04AZ6.2Y
DA16	A7116515	Diode, Zener, 04AZ6.2Y
DA17	A7116515	Diode, Zener, 04AZ6.2Y
DA96	A7116515	Diode, Zener, 04AZ6.2Y
DA98	A7116515	Diode, Zener, 04AZ6.2Y
DA99	A7116515	Diode, Zener, 04AZ6.2Y
DE50	A8636541	Diode (LED), TLS153, Red
DF80	23316334	Diode, Zener, uZ12BSC
DF81	A7116415	Diode, Zener, 04AZ5.6Y
DG14	A7150258	Diode, 1SS176
DT50	A8606431	Diode (LED), TLG153, Green
DV07	23115599	Diode, 1N4148

Location No.	Part No.	Description
MISCELLANEOUS		
⚠ F801	23144898	Fuse, 3.15A
F801A	23165102	Fuse Holder
⚠ F803	23144827	Fuse, 0.63A
F803A	23165102	Fuse Holder
K901	23120371	Remote Sensor, IR-9106-K
P101	23367684	Plug, 11P
P301	23367684	Plug, 11P
P302	23367681	Plug, 8P
P666	23365432	Earphone Jack
⚠ P801	23176705	Power Cord
PH01	23365598	21 Pin Connector
PH02	23365598	21 Pin Connector
S501	23145226	Switch, Push, 1C1P
S502	23145226	Switch, Push, 1C1P
S503	23145226	Switch, Push, 1C1P
S504	23145226	Switch, Push, 1C1P
⚠ S801	23145434	Switch, Power, 2C2P
⚠ V901A	23902019	Socket, CRT, 10P
W661	23351030	Speaker, SPK-1305, 60x120mm, 8 ohm
W662	23351003	Speaker, SPK-1277, 60x70mm, 8 ohm
W663	23351030	Speaker, SPK-1305, 60x120mm, 8 ohm
W664	23351003	Speaker, SPK-1277, 60x70mm, 8 ohm
X401	23153721	Ceramic Resonator, 503kHz, TCR1023
X501	23153979	Crystal, 4.43MHz
X502	23250950	Coil, 1H-Delay Line, DL711
XA01	23153845	Ceramic Resonator, 4MHz, TCR1015
Z101	A5615249	PIF SAW Filter, F1804D
Z201	23107927	Ceramic Video Trap, 5.5MHz, TCF1011
Z202	23107913	Ceramic Video Trap, 6.5MHz, TCF1018
Z661	23107742	Filter, TEM1014
Z662	23107742	Filter, TEM1014
Z663	23107742	Filter, TEM1014
Z664	23107742	Filter, TEM1014
ZF01	23153012	Crystal, 27MHz
ZG04	23107855	Ceramic Filter, 5.5MHz, TCF1031
ZG80	23107856	Ceramic Filter, 5.74MHz, TCF1030
ZV01	23107849	Ceramic Video Trap, 4.43MHz, TCF1032
ZV02	23107744	Filter, 3MHz, TEM1012
ZV03	23107744	Filter, 3MHz, TEM1012
ZV04	23107744	Filter, 3MHz, TEM1012
ZV05	23107744	Filter, 3MHz, TEM1012
ZV06	23107744	Filter, 3MHz, TEM1012
ZV07	23107744	Filter, 3MHz, TEM1012
ZV15	23107744	Filter, 3MHz, TEM1012
ZV16	23107744	Filter, 3MHz, TEM1012
PC BOARD ASSEMBLIES		
U101	23337995	PIF Board, PB1526-1
U902A	23338716	Main Board, PB1948
U903A	23337857	Power-1 Board, PB1451-1
U903B	23337858	CRT Drive Board, PB1451-2
U903C	23337859	Power-2 Board, PB1451-3
U904A	23338732	DPC Board, PB1963-1
U904B	23338733	CTI Board, PB1963-2
U904C	23338734	Control Board, PB1963-3
U904D	23338735	Headphone Board, PB1963-4
UG01	23337996	IGR Board, PB1526-2
PICTURE TUBE		
⚠ V901	23312379	Picture Tube, A59ECY13X31
TUNER		
H001	23121569	Tuner, VHF/UHF, EG448L
REMOTE HAND SET PARTS		
K902	23120032	Remote Hand Unit, CT-9573
AT01	23305090	Upper Case
AT02	23305084	Lower Case
AT03	23305085	Battery Cover
ST01	23305097	Rubber Sheet
UT01	23338428	PC Board, PB1741
ZT01	23153736	Ceramic Resonator, CSB455EB20

MEMO

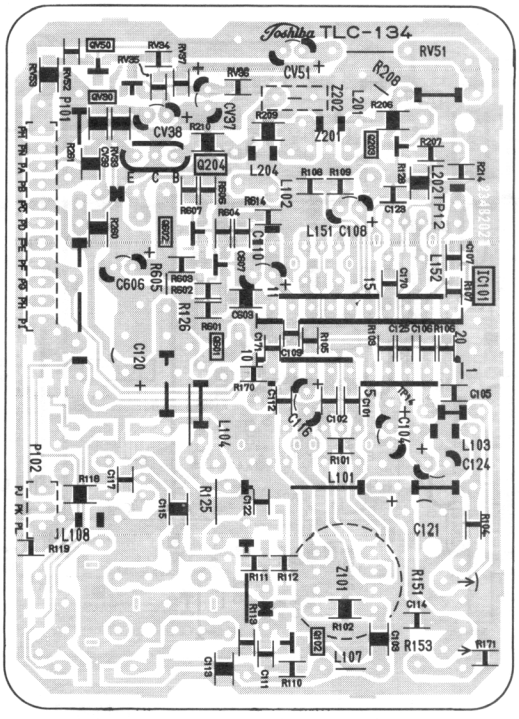
MAIN BOARD PB1948

BOTTOM (FOIL) SIDE



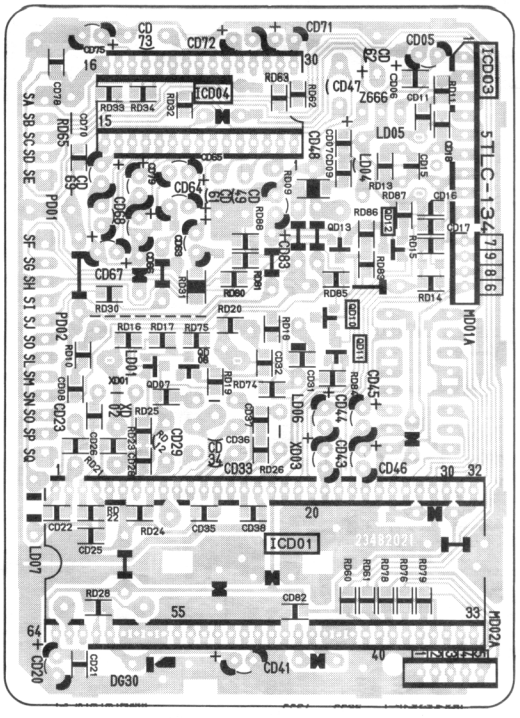
PIF BOARD PB1526-1

BOTTOM (FOIL) SIDE



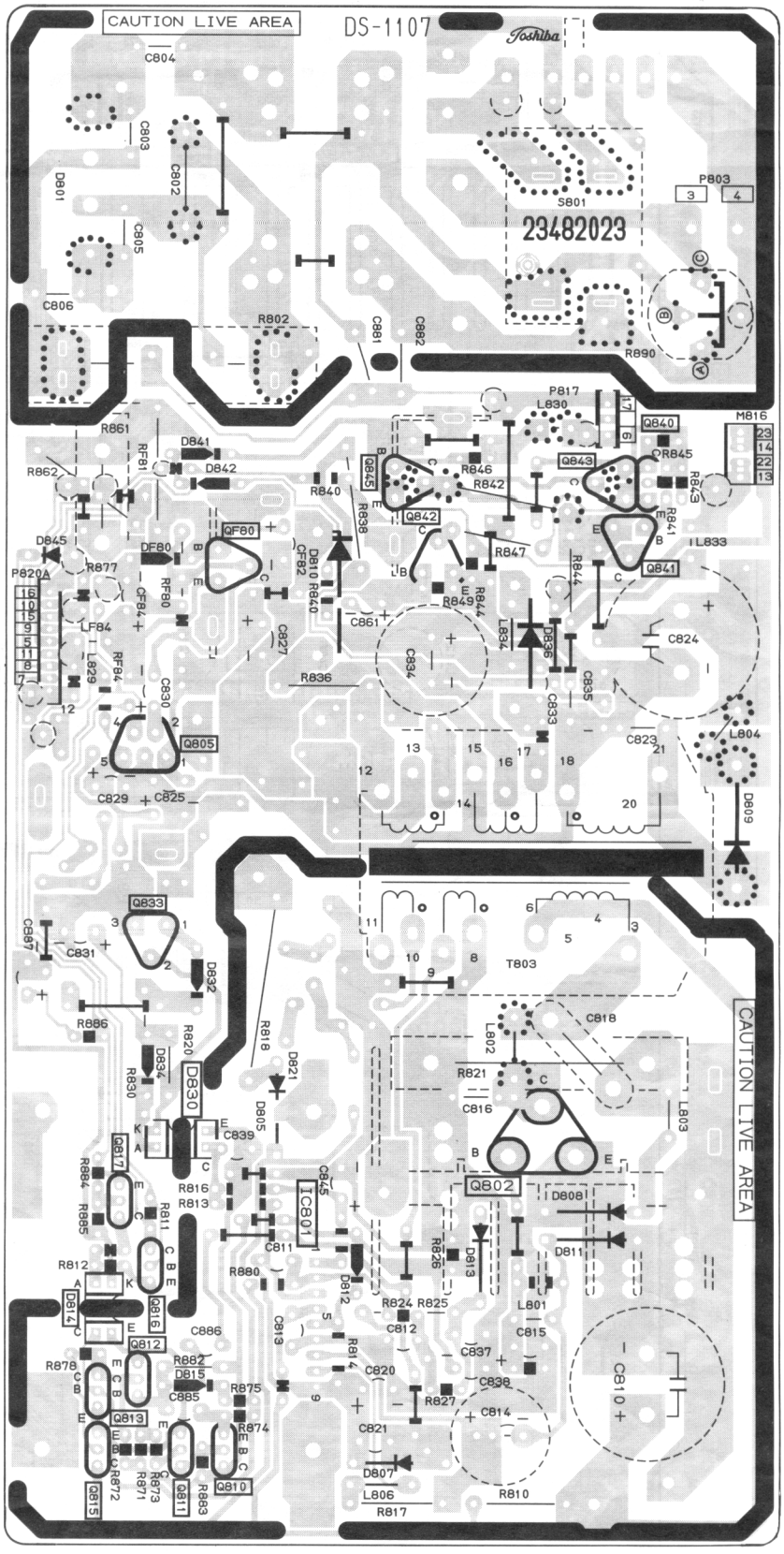
IGR BOARD PB1526-2

BOTTOM (FOIL) SIDE



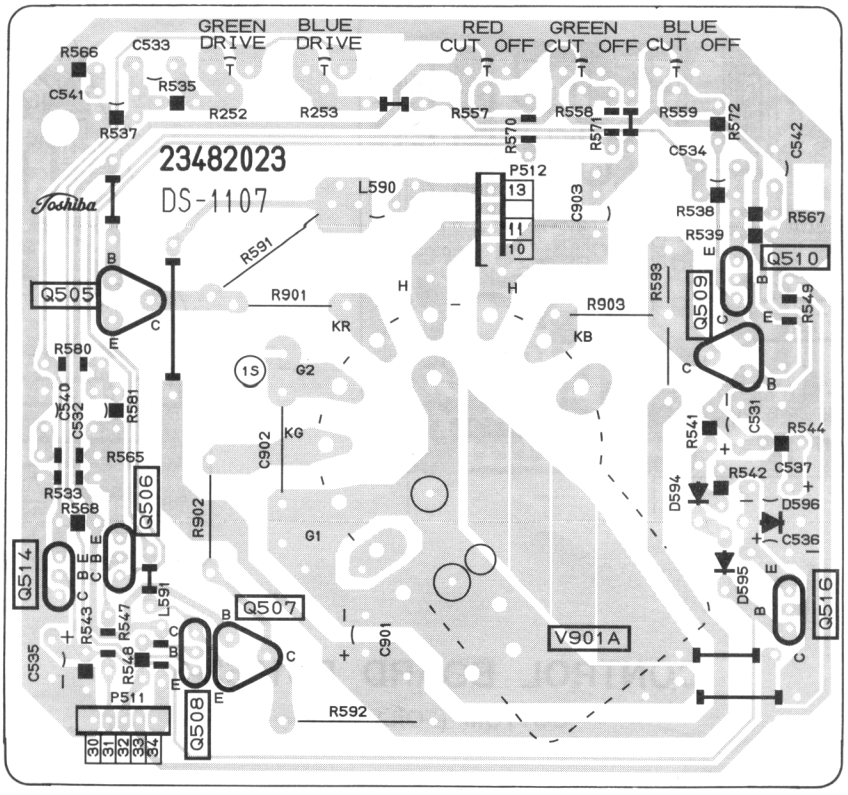
POWER-1 BOARD PB1451-1

BOTTOM (FOIL) SIDE



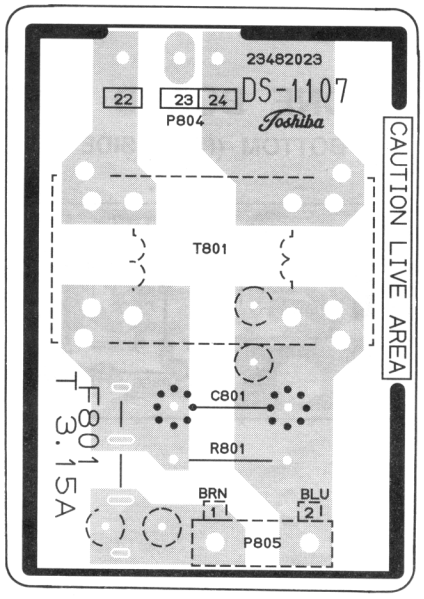
CRT DRIVE BOARD PB1451-2

BOTTOM (FOIL) SIDE



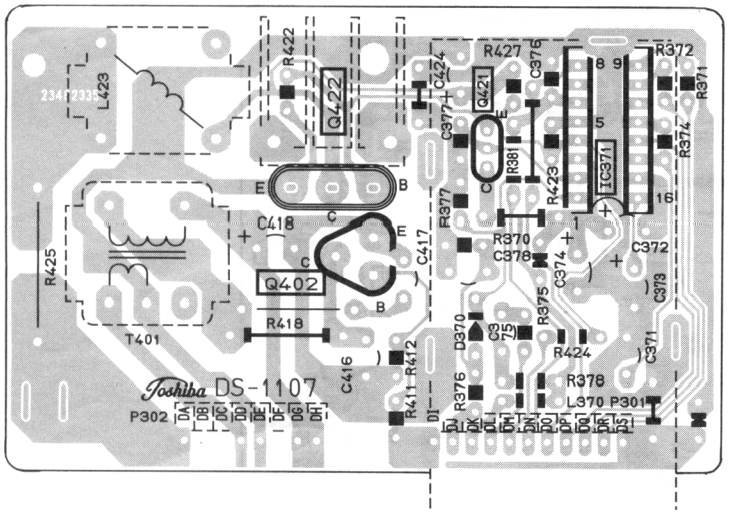
POWER-2 BOARD PB1451-3

BOTTOM (FOIL) SIDE



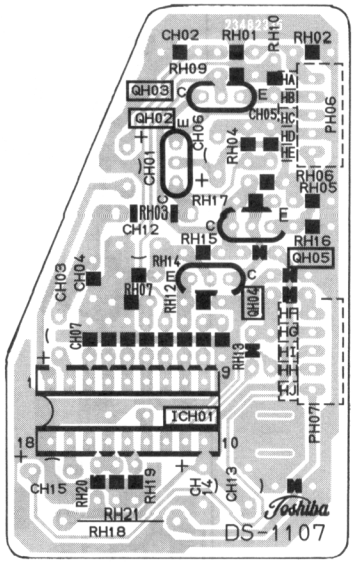
DPC BOARD PB1963-1

BOTTOM (FOIL) SIDE



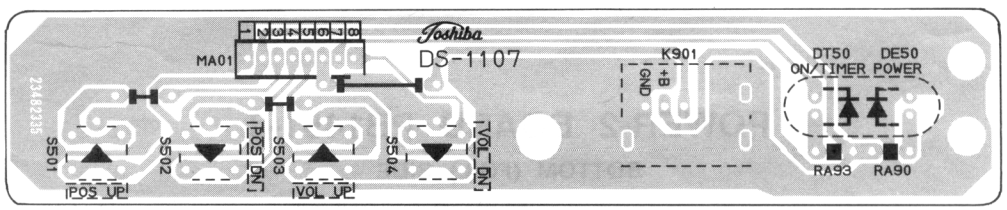
CTI BOARD PB1963-2

BOTTOM (FOIL) SIDE



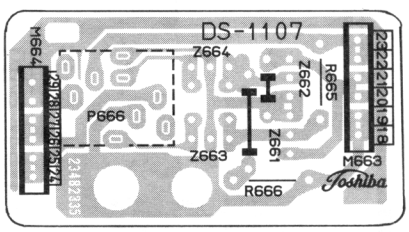
CONTROL BOARD PB1963-3

BOTTOM (FOIL) SIDE



HEADPHONE BOARD PB1963-4

BOTTOM (FOIL) SIDE

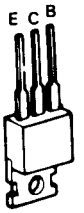


TERMINAL VIEW OF TRANSISTORS

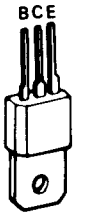
① BC327
BC337
BC547A
BC547B
BC547C
BC557A
BC557B
BC556A

② 2SK30ATM
2SK117

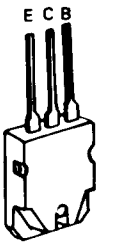
③ BD202



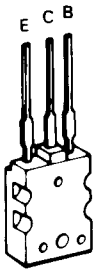
④ BF871
2SD553
2SC1569



⑤ 2SC3678
2SC3182N



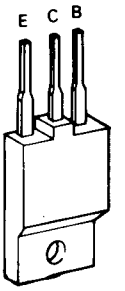
⑥ 2SD1427
2SD1432



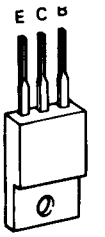
⑦ 2SC2482
2SA1321
2SC2230
2SA1020
2SC2655
2SC752GTM

⑧ 2SC388ATM
2SA1015
2SC1959
2SA562TM

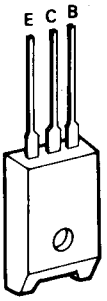
⑨ 2SD1548



⑩ 2SC2023



⑪ ON4408
ON4409



SCHEMATIC DIAGRAM (1/2)

U101 PIF BOARD PB1526-1

UG01 IGR BOARD PB1526-2

U902 MAIN BOARDR PB1948

U904D H.P. BOARD PB1963-4

U903B CRT DRIVE BOARD PB1451-2

TO CTI

Y IN | CLP IN | +12V | Y OUT | +12V-1

TO CTI

(R-Y) OUT | GND | (B-Y) IN | (B-Y) OUT | (R-Y) IN

1Vp-p

1.3Vp-p

1Vp-p

5.0Vp-p

5.0Vp-p

6.2V

2.5Vp-p (H)

5.2Vp-p

0.2Vp-p

5.1Vp-p (H)

6.2V

1.8Vp-p (H)

110Vp-p

104Vp-p

98Vp-p

0.4Vp-p

PULSE 5V 0V

TEXT 3V 0V

5V 0V

IC501 TA8783N V/C/D

VIDEO AMP | TX CONT | BRT.BLK.CRAMP | C-Y AMP | G-Y MAT | FORCED STANDARD SET | SYSTEM CONTROL SCANNING | DE EMP&SW | BURST AMP | DEMO | PAL MATRIX SECAM PERMU | CHROMA AMP | IDENT | APC | CHROMA VCO | VERT | H.V I²L | AFC | 32fH OSC | SYNC SEP.A

ICF02 P/E TEXT SAA5246P/E

IC F03 IM51630LP12, TC5565APL12, TC5565APL12Z

Q206 BC547A Y-AMP

Q207 BC547A Y-BUFFER

Q208 BC547A Y-BUFFER

Q505 2SC3619 RED OUT

Q506 BC547A R-DRIVE

Q507 2SC3619 GREEN OUT

Q508 BC547A G-DRIVE

Q509 2SC3619 BLUE OUT

Q510 BC547A B-DRIVE

Q512 BC547A CHROMA BUFFER

Q514 BC327 VOL.T REGU

Q516 BC547A DISCHARGE SWITCH

D401 04AZ9.1Z or UZ9.1BSC

D402 04AZ33Y or UZ33B5B

D410 04AZ8.2Y

D241 1SS104FA

D307 1N4148

D594 1N4148

D595 1N4148

D596 1N4148

V901 C.CRT A59ECY13X31

P511 (5P) | P511A 2mm5P

GND | RED | GREEN | BLUE | +12V-1

P512A (W4P)

H.PRI.D. | EHT-2 | EHT-1 | +12V-1

(+165V) | (HEATER) | (GND) | (SCREEN) | (FOCUS) | (H.V.)

H.Vcc

+12V-1

SDA

SCL

1HDL

27M

TO CRT

U904D H.P. BOARD PB1963-4

U904C CONT. BOARD PB1963-3

E1

21	SHIELD EARTH
20	VIDEO IN
19	VIDEO OUT
18	RAPID BLK EATRTH
17	VIDEO EARTH
16	RAPID BLANKING
15	RED IN
14	NC
13	RED EARTH
12	NC
11	GREEN IN
10	NC
9	GREEN EARTH
8	EXT/TV
7	BLUE IN
6	AUDIO IN (L)
5	EARTH
4	AUDIO EARTH
3	AUDIO OUT (L)
2	AUDIO IN (R)
1	AUDIO OUT (R)

E2

W663 SPK-1305 or SPK-1268

P663 (6P)

M663 (6P)

PH01

PH02

PA01 (8P)

MA01 (8P)

5501-5504

DE50 TLS153(FA) LED POWER ING.

DT50 TLG153(FA) GREEN ON/TIMER

K901 IR-9106K, IR-9101M

ICV22 TA78L09S 9V REG.

ICV23 TA78L09S 9V REG.

ICV01 TA8777N AV SW

ICY50 TA8775N RGB SW

QY01 2SC752G TMO B/B DRIVE

QV02 BC557A VIDEO BUFFER

QV80 BC547A TEXT BUFFER

QV04 BC337 TV-OUT BUFFER

QA06 BC547A LEVEL SHIFT

QA11 BC557A SYNC SEPA.

QA10 BC547A SYNC SEPA.

QA90 BC547A LED DRIVE

QA12 2SC2878A I²C BUS SW

QA02 2SC2878A I²C BUS SW

QA03 BC547A EXT. INPUT SW

QA04 BC547A EXT. INPUT SW

Q546 BC547A CHROMA BUFFER

Q644 BC557B

ICA01 CXP80420-121 MICRO COMPUTER

ICA07 μPD6254CX

DA04 1N4148

DA05 1N4148

DA01 04AZ5.6Z

DA17 04AZ6.2Y

DA16 04AZ6.2Y

DA96 04AZ6.2Y

DA86 04AZ6.2Y

DA99 04AZ6.2Y

DA15 04AZ6.2Y

LA01 PL-1

LB01 TRF1166D, TRF1166T

XA01 TCR1015

LV03 PL-10

LV01 PL-22

ZV01 4.43MHz

DV07 1N4148

+12V-1

+5V-1

+5V-2

+32V

SCL

SDA

PULSE

5V

0V

1.1Vp-p

2.2Vp-p

4MHz

6VDC

12V

NOT MUTE

C OUT

Y OUT

ICA01
CXP80420-121
MICRO COMPUTER

IC303
AN5521
VERT. OUT

T461
AT2078/25
HOR.OUTPUT TRANS

TO DPC

FROM POWER

P820B 9P

P512A 4P

P512 2.5mm4P (DIP)

P817 2.5mm3P (DIP)

P570 5mmGP

L462 DEFLECTION YOKE

VERT COIL

HOR. COIL

FOCUS

SCREEN

BUS OFF

SCL

SDA

GND

H.PRI.D.

EHT-2

EHT-1

+12V-1

+27V

V.FB

V.D.

V.IN

TO DPC

FROM POWER

(HEATER)

(SCREEN)

(FOCUS)

(H.V.)

SCHEMATIC DIAGRAM (2/2)

IMPORTANT SAFETY NOTICE

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (–) or ground lead of instruments should be connected to the ground marked (⊥) in the shematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⏚) on checking isolated circuit.
3. The voltage readings may vary as much as ±20%.
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

NOTES:

1. This circuit diagram is subject to change without notice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

GROUNDING SYMBOL

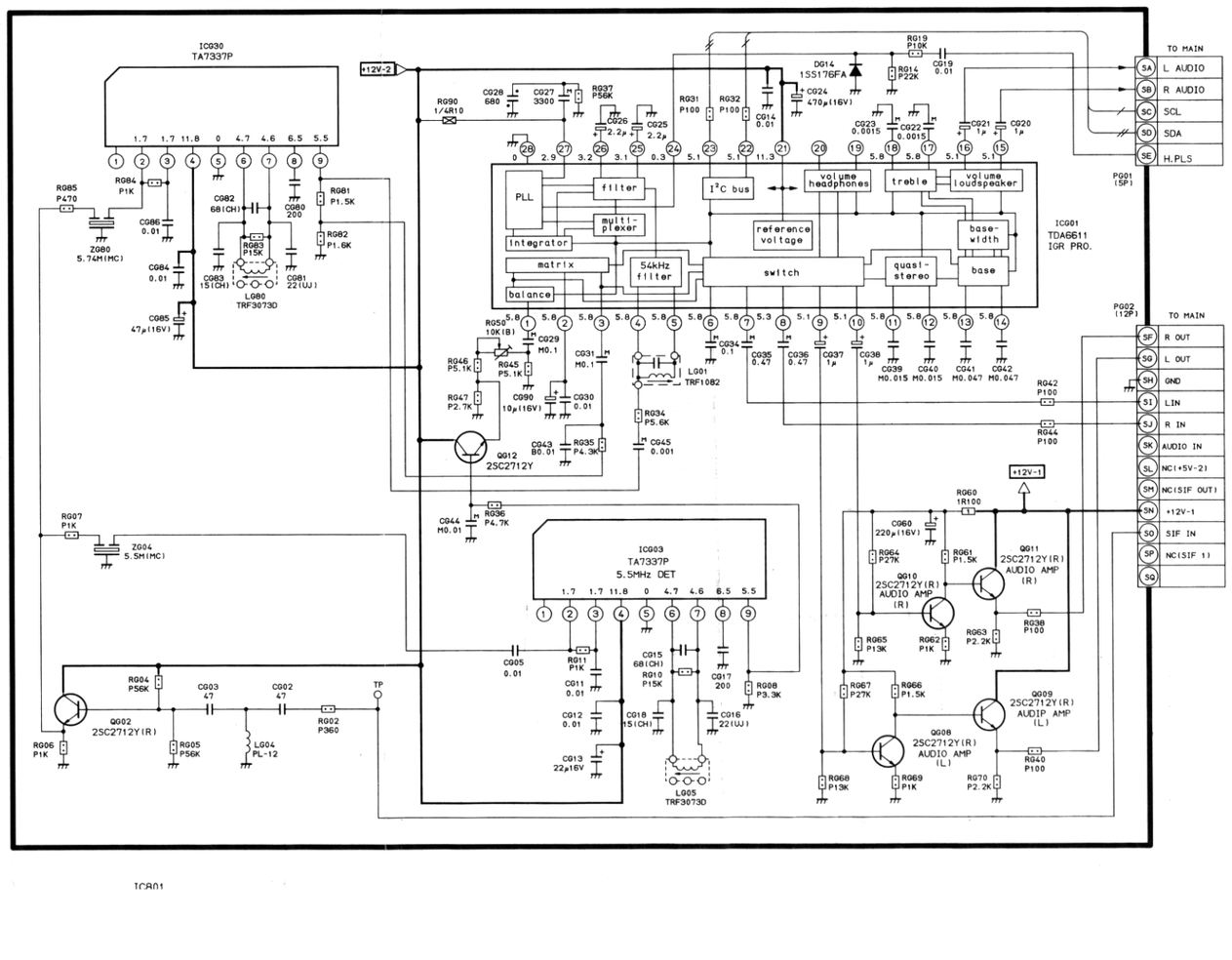
1. ⊥: Non isolated ground, ⏚ : Isolated ground.

RESISTORS

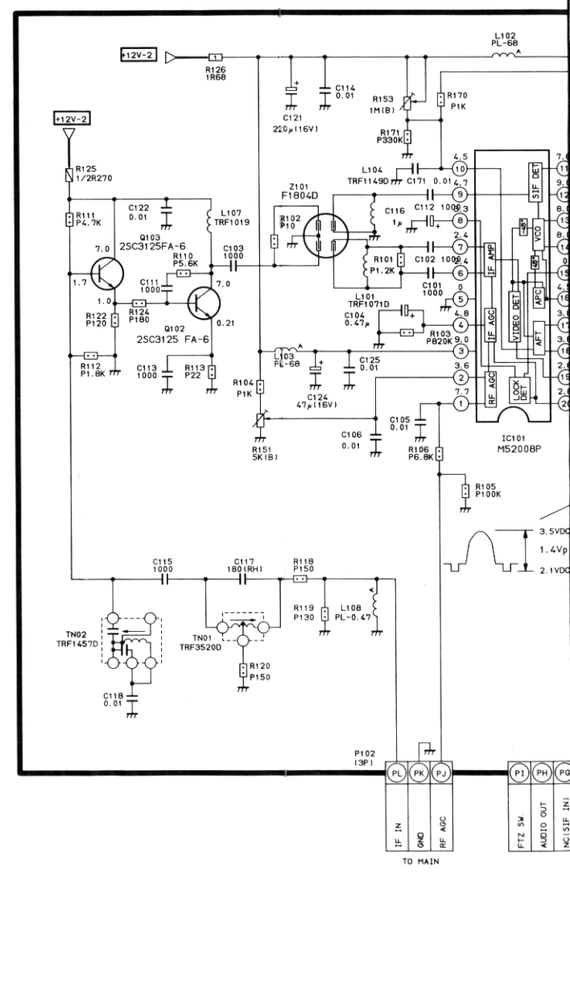
Prefixed to values:

TYPE	
Carbon Comp.	
Oxide Metal Film	
Ins. Carbon Film	
Wire Wound	
Cement covered W.W.	N
Fusible Res.	

UG01 IGR BOARD PB1526-2



U101 PIF BOARD PB1526-1



RESISTORS

Prefixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE	MARK
±1%	(F)
±2%	(G)

Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	1
2W	2

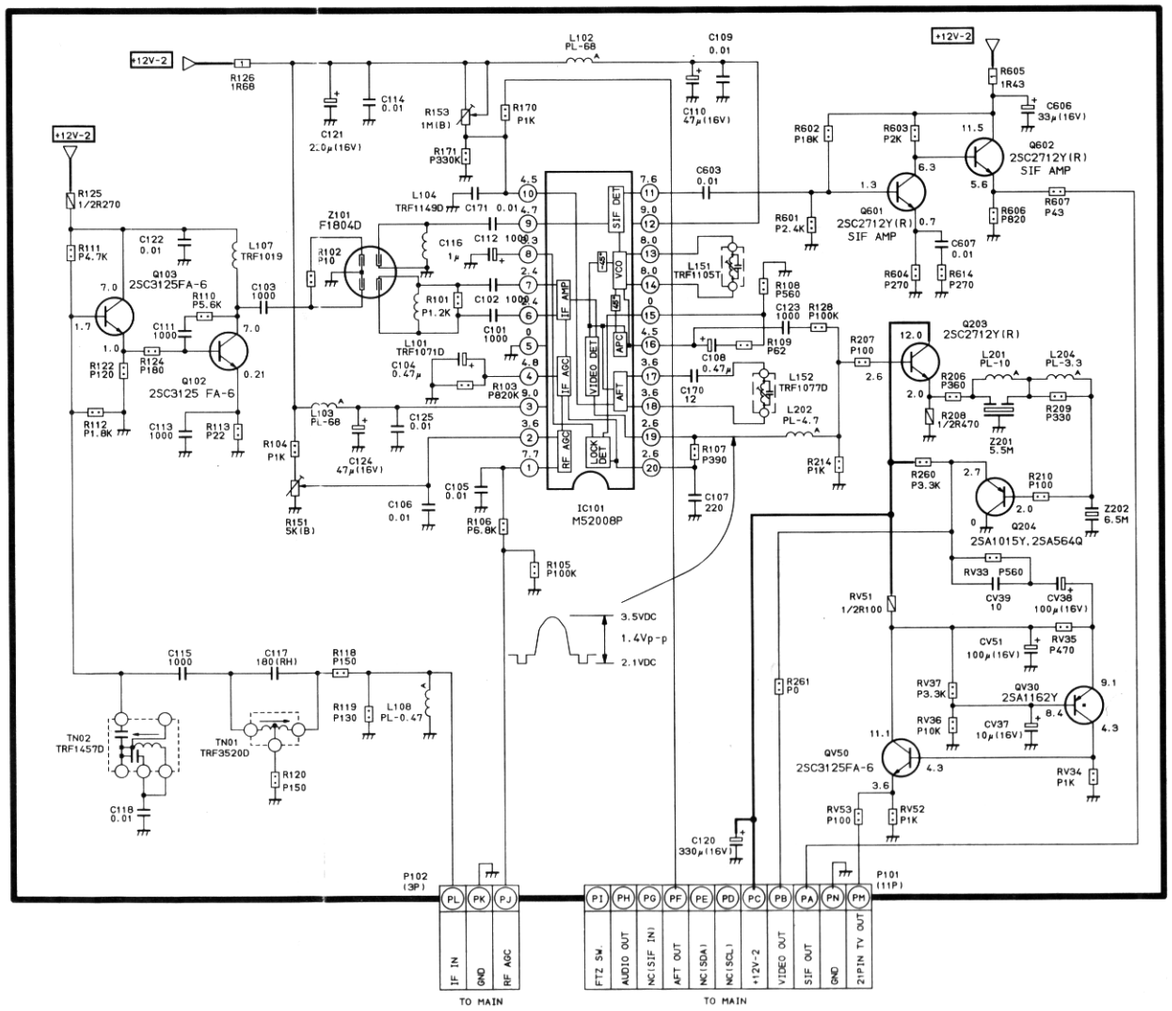
WATTAGE	MARK
3W	3
5W	5
10W	10
15W	15
20W	20
25W	25

CAPACITORS

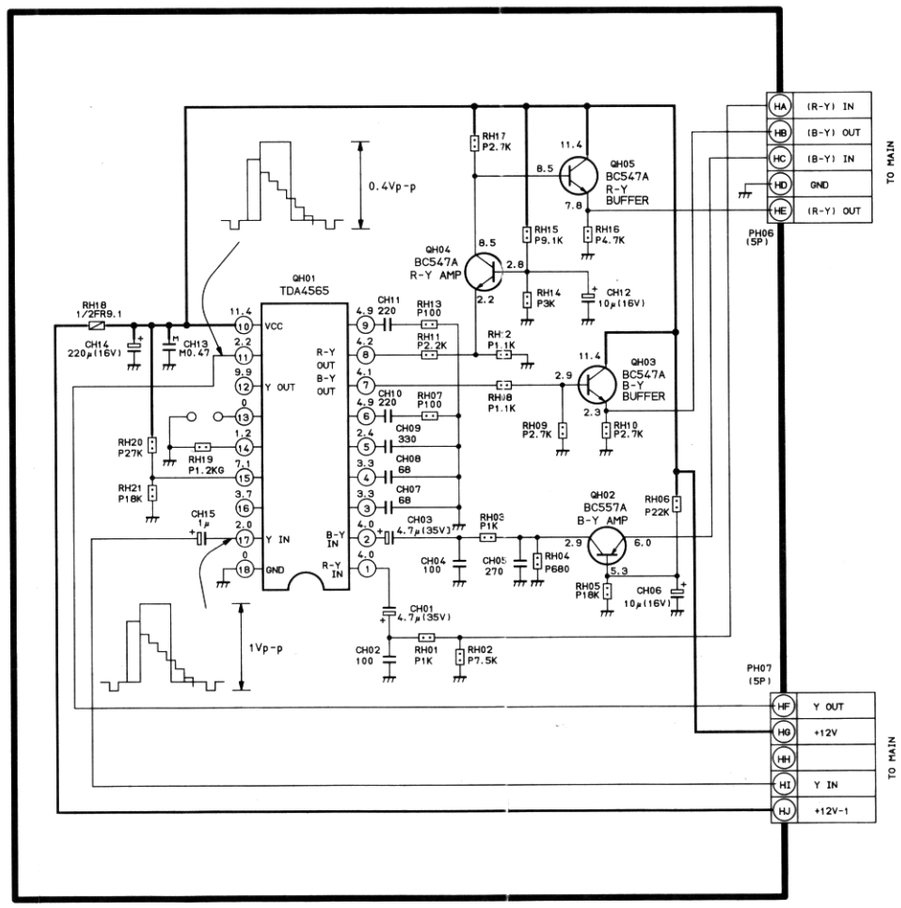
Rating Markings:

Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	

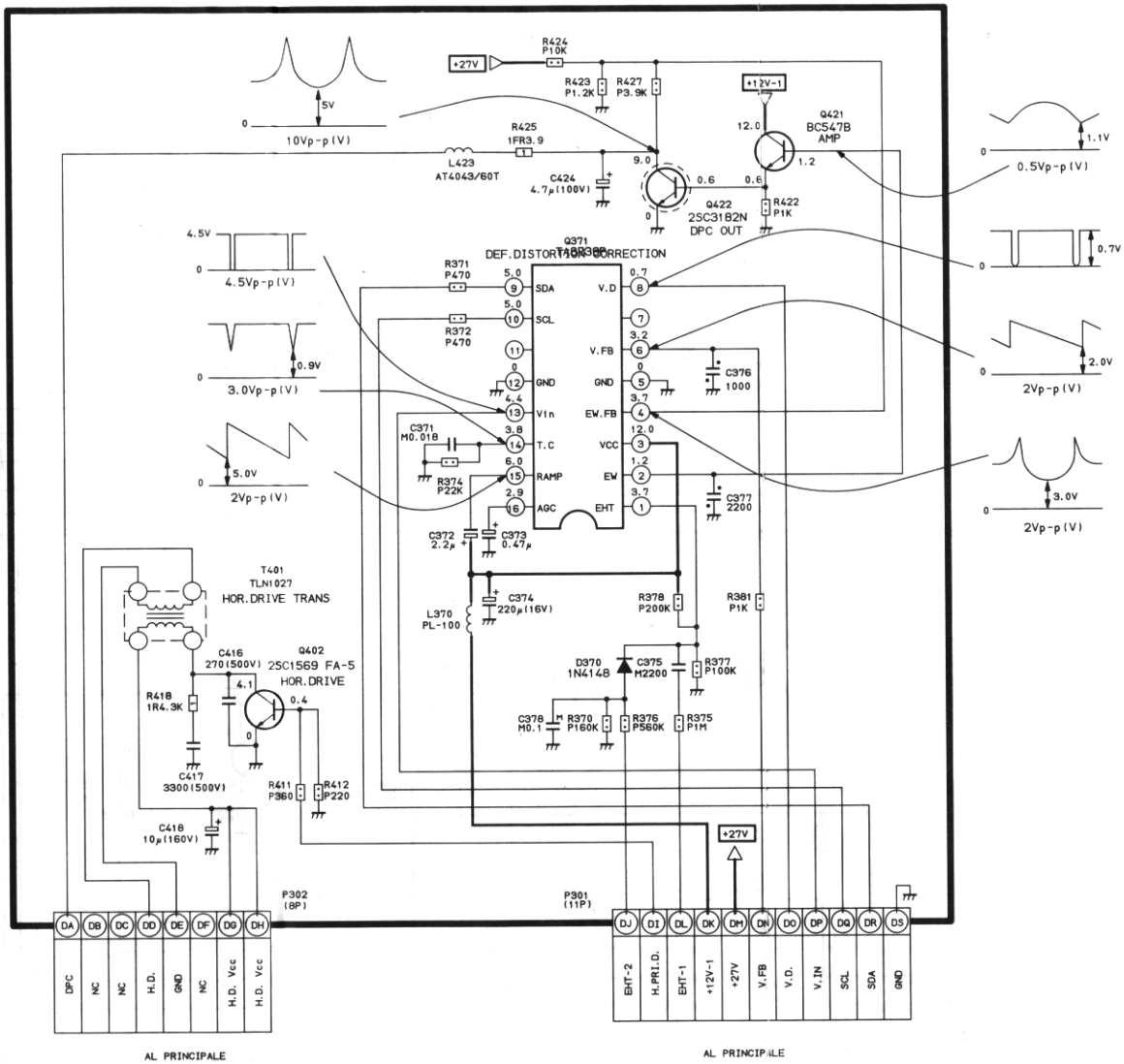
U101 PIF BOARD PB1526-1



U904B CTI BOARD PB1963-2



U904A DPC BOARD PB1963-1



U903A POWER-1
BOARD PB1451-1

U903C POWER-2 BOARD PB1451-3

IC801
PIN ②-⑥
0.7V
0V
0.2V

PIN ④-⑥
1V
2V
0V

PIN ⑦⑧-⑥
1.7V
1.5V
0V

L901 ⚠
TSB2329AR
DEGUSS.COIL

S801 ⚠
MAIN SW.

P803
P810 (6P)
C882 2200(AC400V)
C881 2200(AC400V)
R890 ⚠ PTC96009
P802

P804
T801
TRF3164 or
TRF3157
C801 ⚠ 0.1(AC250V)
R801 1/2R5.6M
F801 ⚠ T3.15A
BRN
BLU
AC220
POWER CORD
⚠P801
P805

D801
RBV-406M or
D35B60
C803 4700(AC250V)
C805 4700(AC250V)
C806 4700(AC250V)
C804 4700(AC250V)
⚠ R802 15W6.2
⚠ C802 0.1(AC250V)

145V
0V
250V

⚠ T803
CONVERTER TRANS.
47317550

700V
500V

R810 1P270K
C810 270μ400V

IC801
TDA4601
POWER CONTROL
4.2 0.1 2.1 2.2 4.8 1.8 1.9 15.4
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

R818 3R15K
D805 BYD33J

0.6V
0V
0.6
2.5V

L802 TEM2011
C818 2200(1.6KV)
Q802 2SD1428FA-E
SWITCHING
C816 330R1(2KV)
L806 TEM2011
C814 22μ(25V)
L801 TLN1015S
320
-0.2
R819 P6.8
C815 1000(50V)
R817 1/2R0.39
L803 TRF9253D
R821 10W180
D808 BYV96E
D811 BYD33J
R822 P39
R815 P220
C811 100P
C813 M0.0068
R813 P1K
R814 P82K
C845 100μ(16V)
R816 P470
D812 UZ13BSC or 04AZ13Z
C820 100μ(50V)
C821 330P
D807 BYD33J.
D813 BYD33J
C840 M0.47
R826 P1K
C838 10μ
R827 P1K
C837 M0.01
R825 1/2R22
R824 P12K
C812 560(SL)

R880 P6.8K
R872 P10K
R871 P10K
Q813 BC547B STAND-BY REG
Q812 2SC2878A STAND-BY REG
R882 P51K
R883 P10K
Q810 BC547B STAND-BY REG
Q815 BC547B STAND-BY REG
R878 P10K
R873 P10K
C885 T1000
D814 TLP621(GR)
D815 1N4148
Q811 BC547B STAND-BY REG
R874 P10K
R875 P5.6K
C886 100(SL)

D809 RU4A
L804 TRF9253D
C823 180(2KV) (R1)
C824 330μ(200V)
R831 3R12K

C841 330(500V)
R836 1/2R0.22
D810 RU4Z
C827 1000μ(25V)
C835 100(SL)
C828 330μ(500V)
C832 1000μ(25V)
R837 1/2FR1
D835 RU4Z

D836 RU4Z
L834 TEM2011
L833 TLN2026
C833 330P500V
R838 2R1K
C834 2200μ50V

C839 M0.47
D830 TLP621(GR)
2.1

R840 P1M
Q841 2SA1320 CURRENT LIMIT.
145.8
146.0
R841 P10K
R844 P1M
R842 1FR0.47
Q840 BC557B +B SW
145.3
145.1
R843 P10K
R845 P3.9K
Q845 2SC2023LF-4 +B SW
148.8
145.0
145.7
R846 P5.6K
Q843 2SA1321(C) +B SW
145.1
R847 1R47K
Q842 2SC2230AY +B SW
0.1
0.6
R839 P10K
R849 P2.7K
C861 470μ(10V)

L330 TLN2026
R861 5W3.8K
R862 2R16K
D841 1S2462
D842 1S2462

LF84 TLN2026
RF80 1/2FR2.7
18.2
11.6
QF80 2SD553Y 12V REGU
12.2
RF81 2R15K
CF82 220μ(25V)
DF80 04AZ12Z or UZ12BSC

C825 0.01
C830 1μ
18.5
4.0
Q805 L78MR05 5V REGU
5.0
5.0
C829 10μ
L829 PL-10
R877 P1K

LF83 TLN2026
RF83 1/2FR2.7
11.5
5.1
5.7
QF81 2SD553Y 5V REGU
CF83 47μ
RF84 P1.2K
DF81 UZ5.6BSB or 04AZ5.6Y
CF84 47μ16V

R830 2R30K
146.0
143.5
D832 UZ2.7BSB or 04AZ2.7Z
60~120
Q833 SE140N ERROR AMP
R820 1/2R1K
D834 1S2462
C831 4.7μ(200V)

T803
PIN ⑨-⑧
16V
0V
10V
20V

Q817 BC547B STAND-BY REG
0.1
0.7
R812 P1K
4.4
5.0
Q816 BC547B STAND-BY REG
5.0
R811 P10K
C887 47μ(16V)
R884 P10K
R885 P10K
R886 P10K
D845 1N4148

P817
#43 GND
#45 +145V

P820A
#30 +5V-2
#34 H.VCC
#29 +32V
#27 +12V-2
#32 Q501(#52)
#31 +5V-1
#27 GND
#33 RESET
#35 μ-CON ON/OFF

M816
#38 AUDIO
#36 GND

TO MAIN BOARD